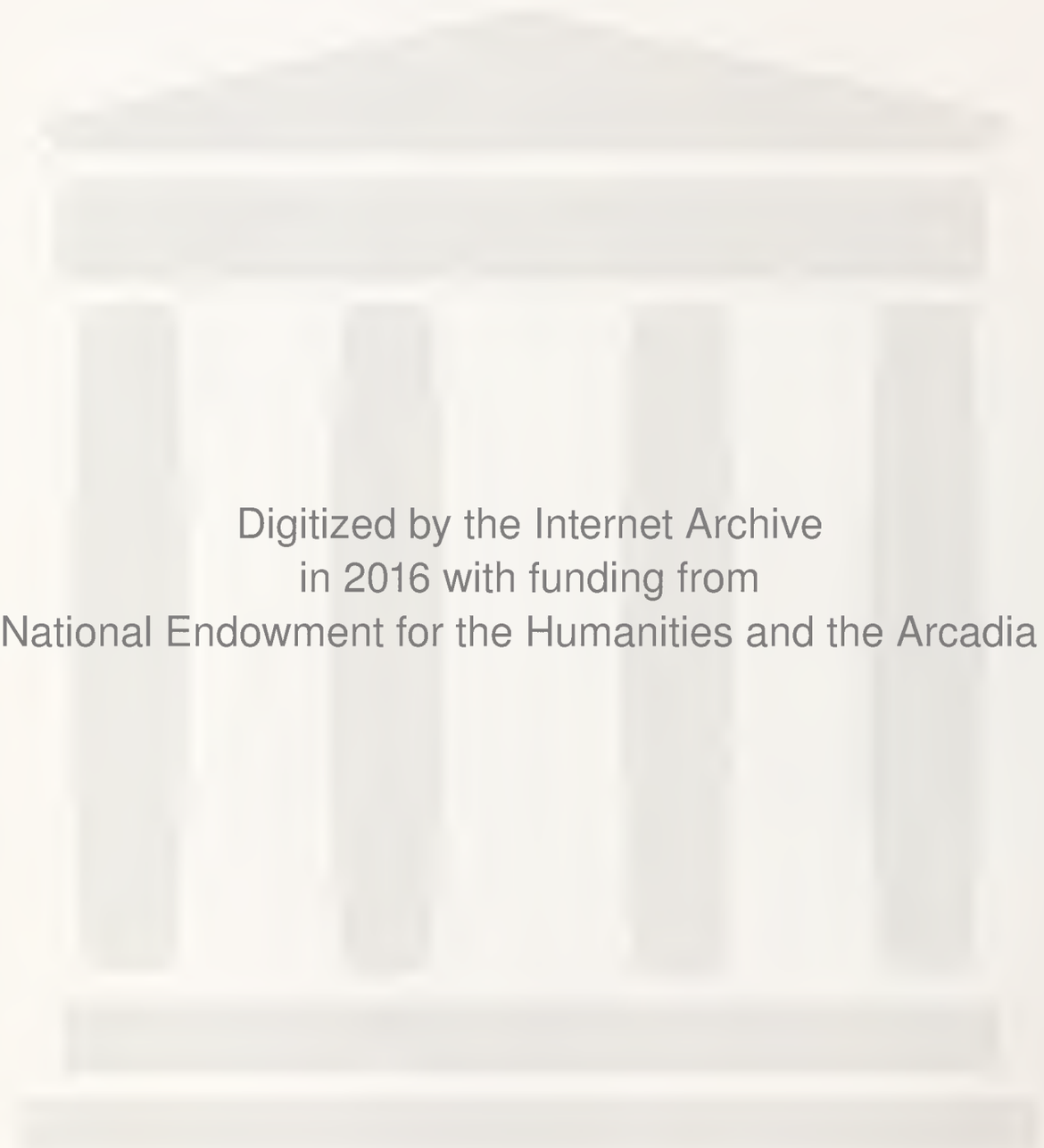
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ARIZONA MEDICINE

Will his return to work mean the return of undue psychic tension?



When it's mandatory to keep the post-coronary patient calm, consider Valium (diazepam).

Although he's promised to take it easy back on the job, you know he's going back to the same stressful circumstances that may have contributed to his hospitalization. If he experiences excessive anxiety and tension because of overreaction to stress, your prescription for Valium can bring relief. During the period of readjustment Valium can quiet undue anxiety.

For moderate states of psychic tension, 5-mg or 2-mg Valium tablets *b.i.d.* to *q.i.d.* can usually provide reliable relief. For severe tension/anxiety states, the 10-mg tablets often produce desired results.

The most commonly reported side effects are drowsiness, ataxia and fatigue. Until individual response is determined, caution patient against driving or operating dangerous machinery.

Valium® (diazepam)

For the tense cardiac patient who must be kept calm

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. *Adults*: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients*: 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) *Children*: 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

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Nutley, N.J. 07110



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January, 1973, Vol. 30, No. 1

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Insights into the ulcer-prone

This man governs an empire—the section of beach that he combs—and he may have much in common with a business tycoon. Both may be ulcer-prone for similar reasons: both may be difficult to please—both may be demanding, especially of themselves. While there are many types of duodenal ulcer patients, it has been noted that, characteristically, these individuals are not easily satisfied.

Measuring oneself against one's own expectations or against those of society may be equally trying—equally anxiety-provoking. It is hard to win when both success and failure can demand a similar price.

If the ulcer patient were to modify his expectations, he would experience less anxiety—and perhaps fewer ulcer attacks. In most cases, this would mean altering the entire constellation of psychological attitudes. Many are unwilling to do so, and many are unable. But while the patient is trying to make his best adjustment to his ulcer, he often needs therapeutic relief for both the undue anxiety with which he may be plagued and the hypersecretion and hypermotility that cause pain and spasm.

*Palmer, E. D.: *Clinical Gastroenterology*, ed. 2, New York, Hoeber Medical Division, Harper & Row, 1963, p. 206.

Captain of Industry



Librax can relieve excessive anxiety, thereby helping to reduce pain and spasm

Since duodenal ulcer is frequently associated with excessive anxiety and tension, therapy logically demands relief from both the psychic and the somatic discomfort. Librax can help provide this dual relief. Only Librax provides in a single capsule both the antianxiety action of Librium® (chlordiazepoxide HCl) and the antisecretory/antispasmodic action of Quarzan® (clidinium Br). With Librax, the patient usually tends to react less strongly to anxiety-provoking situations, and hypersecretion and hypermotility are also reduced. A reduction of associated pain and spasm can also be expected, and often ulcer attacks become fewer and farther between!

Up to 8 capsules daily in divided doses

Optimum therapeutic response can be achieved with individualization of dosage—within the range of 1 or 2 capsules, 3 or 4 times daily. Many patients will respond well to 1 capsule *t.i.d.* and 2 at bedtime. Librax can often be relied on both to help in managing the acute attack and to help the patient maintain gains in therapy.

Librax: Initial therapy, Rx #35, Sig: cap. $\frac{1}{1}$ *t.i.d. a.c.* and $\frac{2}{11}$ *h.s.*

Follow-up therapy, Rx #100, Sig: cap. $\frac{1}{1}$ *t.i.d. a.c.* and $\frac{2}{11}$ *h.s.*

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.

How Supplied: Librax® Capsules, each containing 5 mg chlordiazepoxide hydrochloride (Librium®) and 2.5 mg clidinium bromide (Quarzan®)—bottles of 100 and 500.

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for the anxiety-linked symptoms of duodenal ulcer adjunctive

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Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug.The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to ocour.
USUAL DOSAGE: Adults — 600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.
Children — 3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

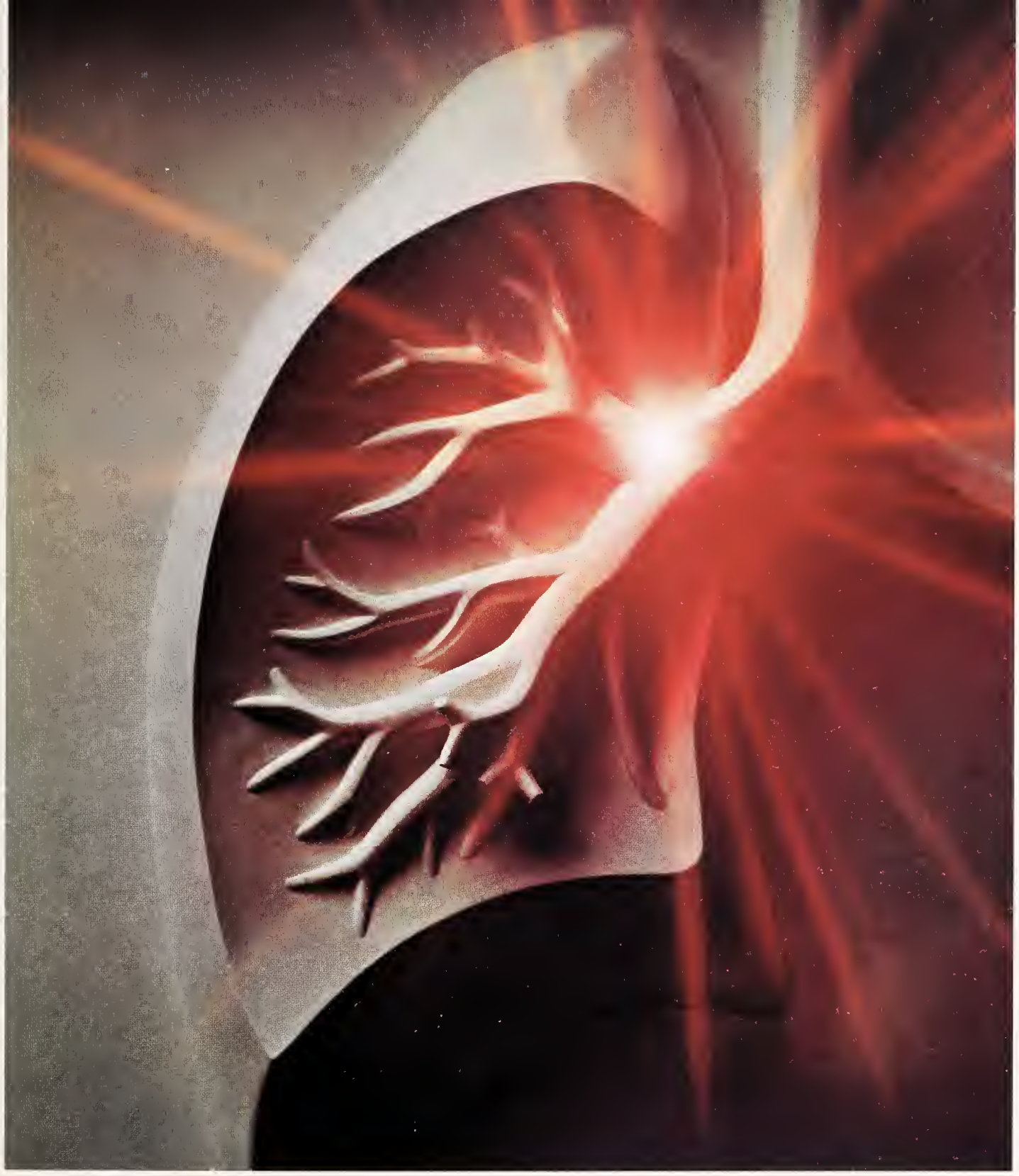
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71

WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

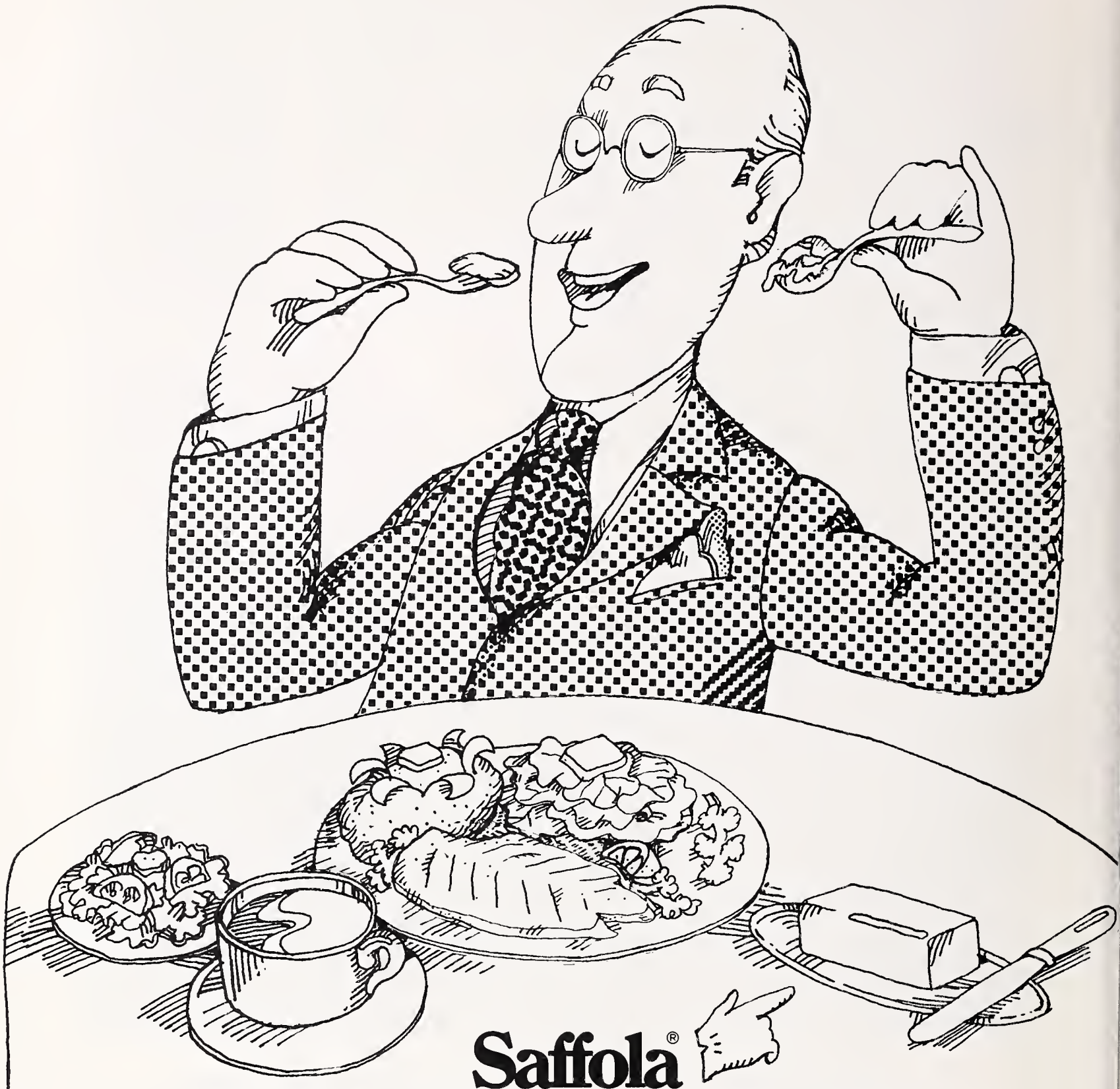
Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

udies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



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TRADEMARK

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two tubes...two weeks

* **Indication:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: For the treatment of vulvovaginal candidiasis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

Ortho Pharmaceutical Corporation·Raritan, New Jersey 08869

Ortho

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G.I. problems making her a fixture in your office?



'Milpath' can cut down her complaints by helping to control: bloating/cramping/pain/'nervous stomach' when aggravated by anxiety and tension *

For most patients:	*When spasm is severe:*
'Milpath'-400 (meprobamate 400 mg + tridihexethyl chloride 25 mg) Usual adult dose: *One* tablet t.i.d. at mealtimes, and two tablets at bedtime.	**'Milpath'-200** (meprobamate 200 mg + tridihexethyl chloride 25 mg) Usual adult dose: *Two* tablets t.i.d. at mealtimes, and two tablets at bedtime.

* **INDICATIONS:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Possibly" effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension.

Final classification of this indication requires further investigation.

CONTRAINDICATIONS: Tridihexethyl chloride: Previous allergic or idiosyncratic reactions to it or related compounds; urinary bladder-neck obstructions (e.g., prostatic obstructions due to hypertrophy); pyloric obstructions because of reduced motility and tonus; organic cardiospasm (megaesophagus); glaucoma; possibly in stenosing gastric or duodenal ulcers with significant gastric retention. **Meprobamate:** Acute intermittent porphyria and allergic or idiosyncratic reactions to meprobamate or related compounds such as carisoprodol, mebutamate, tybamate, carbromal.

WARNINGS: Meprobamate: *Drug Dependence:* Physical and psychological dependence and abuse have occurred. Chronic intoxication, from prolonged use and usually greater than recommended doses, leads to ataxia, slurred speech, vertigo. Carefully supervise dose and amounts prescribed, and avoid prolonged use, especially in alcoholics and addiction-prone persons. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis; rarely convulsive seizures, more likely in persons with CNS damage or pre-existent or latent convulsive disorders). Therefore, reduce dosage gradually (1-2 weeks) or substitute a short-acting barbiturate, then gradually withdraw. *Potentially Hazardous Tasks:* Driving a motor vehicle or operating machinery. *Additive Effects:* Possible additive effects between meprobamate, alcohol, and other CNS depressants or psychotropic drugs. *Pregnancy and Lactation:* Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or women of childbearing potential. Animal data at five times the maximum recommended human dose show reduction in litter size due to resorption.

PRECAUTIONS: Tridihexethyl chloride: Use cautiously in elderly males (possible prostatic hypertrophy). **Meprobamate:** To avoid oversedation, use lowest effective dose, particularly in elderly and/or debilitated patients. Consider possibility of suicide attempts; dispense least amount of drug feasible at any one time. To avoid excess accumulation, use caution in patients with compromised liver or kidney function. Meprobamate may precipitate seizures in epileptics.

ADVERSE REACTIONS: Tridihexethyl chloride: Dry mouth (fairly frequent at oral doses of 100 mg), constipation or "bloated" feeling, tachycardia, bradycardia, dilated pupils, increased ocular tension, weakness, nausea, vomiting, headache, drowsiness, urinary hesitancy or retention, dizziness. **Meprobamate:** *Central Nervous System:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity. *Gastrointestinal:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations, tachycardia, various forms of arrhythmia, transient ECG changes, syncope; also hypotensive crises (including one fatal case). *Allergic or Idiosyncratic:* Usually after 1-4 doses. Milder reactions: itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). *Other:* leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe, rare hypersensitivity: hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case after meprobamate plus prednisolone). Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids). *Hematologic:* Agranulocytosis and aplastic anemia (rarely fatal), but no causal relationship established. Rarely, thrombocytopenic purpura. *Other:* Exacerbation of porphyric symptoms.

USUAL ADULT DOSAGE: One 'Milpath'-400 (meprobamate 400 mg + tridihexethyl chloride 25 mg) tablet three times a day at mealtimes and 2 at bedtime. For greater anticholinergic effect, 2 'Milpath'-200 (meprobamate 200 mg + tridihexethyl chloride 25 mg) three times a day at mealtimes and 2 at bedtime. Meprobamate dose should not exceed 2400 mg daily.

Not for use in children under age 12.

OVERDOSAGE: Tridihexethyl chloride: Acute overdosage can produce dry mouth, difficulty swallowing, marked thirst; blurred vision, photophobia; flushed, hot, dry skin, rash; hyperthermia; palpitations, tachycardia with weak pulse, elevated blood pressure; urinary urgency with difficulty in micturition; abdominal distention; restlessness, confusion, delirium and other signs suggesting acute organic psychosis. Empty stomach after administration of Universal Antidote and treat symptomatically as indicated. **Meprobamate:** Suicidal attempts with meprobamate, alone or with alcohol or other CNS depressants or psychotropic drugs, have produced drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse, and death. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Meprobamate is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

REV. 5/72

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Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



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(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

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– George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

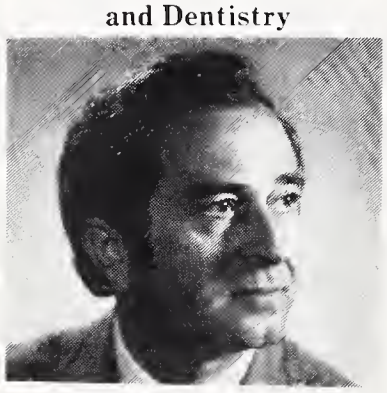
Results of a questionnaire to 7,000 physicians:

62.9%
Believe combination drug products are useful.

13.8%
Do not believe combination drug products are useful.

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility – and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription–which is more than can usually be said for the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good example of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investigators and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in use for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin - streptomycin combinations that patients – especially surgical patients – were given in one injection. This made for less discomfort for the patient, less demand on nurses' time, and fewer opportunities for dosage errors. To take such a preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the proper use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in making this determination. In fact, I don't think it can avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are
sed effectively to treat a
ertain condition, and it is
nown that they are com-
atible, it clearly is useful
nd convenient to provide
hem in one dosage form.
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act it would be pedantic,
o insist they always be
rescribed separately. To
void the appearance of
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ries the combination be-
ause it is a fixed dosage
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avokes the concept of fixed
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he fact that single-ingre-
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rations are also fixed
osage forms. By a singular
emantic exercise he im-
ies a pejorative meaning
the term "fixed dose"
nly when he uses it with
espect to combinations.
What is ignored is the sim-
e fact that only in the
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oes any physician attempt
titrate an exact thera-
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ent. It is quite possible
at some aches and pains
ill respond to 500 mg. of
pirin yet that fact does
ot militate against the *us-
al* dose being 650 mg.

The other semantic ploy
ten called into play is to
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onal.

Take antibiotic mixtures,
e source of much of the
iticism generated against
combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by $443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irrefutable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?
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Original Articles

INTRAMURAL HEMATOMA OF THE DUODENUM

ADEL MONTASIR, M.D., F.R.C.S.
WARD D. O'SULLIVAN, M.D., F.A.C.S.

Traumatic intramural hematoma of the duodenum is most commonly a lesion in the young. It is not common, but its recognition is important. This paper presents a well documented case, which was treated successfully by surgery. The literature is reviewed.

Though first noted in 1838 by McLauchlan at the autopsy of a forty-nine year old man who died of duodenal obstruction and dehydration,[1] only ten cases of duodenal hematoma were reported over the following one hundred years. Radiologic findings associated with intramural intestinal hematoma were described by Liverund in 1948 in his report of a case involving the jejunum.[2] Jones et al. recently reviewed the available literature and reported on one hundred and twenty-five cases, including one of their own.[3] Only a few of these had been correctly diagnosed preoperatively. Even when barium studies of the upper gastrointestinal tract had been done once or more as in cases reported by Felson, the correct diagnosis was missed.[4] Lack of suspicion and the finding of an elevated serum amylase sometimes led to an erroneous preoperative diagnosis of traumatic pancreatitis. In a case reported by Spencer[5] the history of blunt abdominal trauma was obtained only after an exploratory laparotomy for obstruction. The author stated that the condition would not have been suspected even if such history had been available. Many cases have been misdiagnosed as acute appendicitis and the true nature of the lesion discovered only after opening the abdomen.[6]

This paper presents an additional case which had been diagnosed preoperatively. The operative procedure and findings have been documented with photographs. Preoperative and postoperative radiologic studies are presented.

Surgeon, Phoenix Hospitals. (Dr. Montasir)
Chairman of Surgery, Mercy Catholic Medical Center, Professor of Surgery, Jefferson Medical College. (Dr. O'Sullivan)

CASE SUMMARY

H.K., hospital admission #158273, is a six year old Negro male who was brought to the accident room of the Misericordia Division of the Mercy Catholic Medical Center on 5/28/71 after he had been hit by an automobile. There was no history of loss of consciousness. He was conscious and a large hematoma was noted on the left parietal region of the scalp. The child had no neurologic deficit. No fracture could be seen on x-ray of the skull. He vomited twice in the accident room and was therefore admitted for observation of his head injury. The abdomen was soft and there were no masses or tenderness on initial examination.

The child's weight was forty-four pounds. The pulse rate was 110 per minute and regular. Respiratory rate was regular at twenty per minute. His temperature was 98.6°F. His hemoglobin was 11.8 Gms.; hematocrit 35 volume per cent; white blood count 10,900 per cubic mm. with

75% neutrophils, 4% stabs, and 15% lymphocytes. Urinalysis was within normal limits.

The patient remained conscious but continued to vomit. Intravenous fluids were continued. Vomiting followed the ingestion of any fluid and the vomitus was clear and free of bile. On abdominal examination on 5/31/71 muscle guarding was apparent and a lemon-sized mass was felt in the left upper quadrant. Bowel sounds were normal. There was no clinical icterus. The child's temperature remained normal and no significant change in vital signs was noted. Serum electrolytes and x-ray studies were obtained. Serum electrolytes were: sodium — 135 mEq. per liter; potassium — 4.2 mEq. per liter; chloride — 88 mEq. per liter; and bicarbonate — 20 mEq. per liter.

On barium study of the upper gastorintestinal tract the esophagus was normal and no hiatal hernia or reflux was noted. The stomach filled in a normal manner and there were no filling defects. The duodenal bulb was outlined normally. There was complete obstruction of the second portion of the duodenum with an intramural mass. The little barium that passed beyond this caused a "coil spring" effect. (Figure 1 abc) An I.V.P. was obtained by injecting contrast media into the femoral vein. The renal architecture was normal but the venocavogram showed partial obstruction at the level of the second lumbar vertebra.

The diagnosis of intramural hematoma of the duodenum was made and the patient was prepared for surgery with nasogastric suction and intravenous fluid therapy.

A laparotomy was performed the following day. An upper midline incision was made. No free blood was noted in the peritoneal cavity.



Figure 1a
Preoperative barium study of the upper G.I. tract showing obstruction starting in the second portion of the duodenum.



Figure 1b
Close up view of the duodenum. The small trickle of barium that passed into the seeond portion of the duodenum outlines a grossly deformed duodenal lumen.



Figure 1c
In this Xray taken five and one half hours after the upper G.I. study, one may see that the obstruction is complete and no barium has passed the duodenum.

The gall bladder was tensely distended. Obstruction of the common bile duct presumably explains this and the bile-free vomitus. Bluish discoloration of the second part of the duodenum was noted. Upon incising the serosa on the lateral side, a big hematoma, occupying the bowel wall to the mucous membrance bulged out and was dissected by blunt and sponge dissection. (Fig. 2 ab) A mass, the size of a small hen's egg, was palpated through the wall of the proximal few inehes of the jejunum. (Fig. 3 a) An enterotomy incision, one inch long, was made vertically in the jejunal wall over the mass, and, as can be seen in figure 3-b, the mass was formed by a posterior clot prolapsing the duodenal mucosa down into the lumen of the upper jejunum. This hematoma was then approached from the posterior wall after dividing the ligament of Trietz and mobilizing the fourth part of the duodenum and upper end of the jejunum. This hematoma was evacuated in the same manner as before but here the mucous membrane was found to be very thin in areas. (Fig. 3 e & d) A three millimeter tear of thinned mucosa occurred. It was closed and the thinned mucosa plicated with continuous stitch of #000 catgut and the area was reinforced with omental patch sutured with #0000 silk to muscle and serous



Figure 2a
In this photograph the serosa of the lateral portion of the duodenum has been incised and the gross hematoma exposed.



Figure 2b
The hematoma has been evacuated. The thickened mucosa is bulging through the serosal defect.



Figure 3a
The jejunum is in the surgeon's fingers. An intraluminal mass can be appreciated proximally just beyond the ligament of Trietz.



Figure 3b
After the enterotomy a hemorrhagic mass is seen in the jejunal lumen.



Figure 3c
The duodenal mucosa and its underlying hematoma has prolapsed out of the enterotomy site.



Figure 3d
This picture shows the mucosa of the fourth portion of the duodenum after removal of the submucosal hematoma. Here the mucosa was much thinned and needed plication.



Figure 4
Specimen removed at operation over a centimeter rule. There are varying degrees of organization in the thrombus.

coats at the edges of the thin areas. The serosa on the second part of the duodenum could not be sutured. The enterotomy wound was closed transversely. The abdomen was then closed in layers. The blood clots removed during surgery are shown in Figure 4.

The postoperative course was uneventful. The nasogastric tube was removed after three days and fluids were given orally on the same day. The child's diet was gradually increased to normal on the fifth day. The sutures were removed after eight days. A repeat barium study was done on the tenth postoperative day, and normal passage through the duodenum and jejunum was demonstrated.

DISCUSSION

While the above condition is diagnosed with increasing frequency, it still remains a relatively rare surgical entity. During a five year period, Perry found only four cases of duodenal injury among 152 cases of abdominal injuries and all were secondary to blunt trauma.[6] The duodenum is involved in fifty per cent of cases of intestinal hematoma.[5] Males and those in young age groups are most susceptible. The higher incidence in children could be due to the high flared costal margin and weak abdominal muscles. Blunt abdominal trauma is the most common cause and such history could be obtained in seventy-five per cent of reported cases. This trauma characteristically occurred several hours or days before the onset of symptoms and, in some cases, has been forgotten by the patient and his family. Delay in the appearance of obstructive symptoms could be due to the hyperosmotic effect of the liquefying hematoma similar to that responsible for the enlargement of a chronic subdural hematoma.[5-7]

Other conditions have been implicated in the etiology of intramural duodenal hematoma. Those listed by Jones et al. include: anti-coagulant therapy, blood dyscrasias, pancreatic disease and alcoholism, severe hiccoughs, ruptured aortic anuerysm, reduplication of the jejunum with associated angiomatous malformation, and as a complication of peroral small bowel biopsy, using a biopsy capsule.[3]

Partial intussusception of the intestinal mucosa may occur distal to the hematoma. This explains the presence of the "coil spring" sign on radiologic contrast study.[8]

Except in ten cases out of 125, reviewed by Jones et al.[3] where the abdomen was immediately explored because of signs of acute intra-abdominal injury, symptoms of acute high intestinal obstruction were noted twenty-four to forty-eight hours post trauma. Vomiting was the most common symptom. Abdominal pain, mainly in the right upper quadrant, was also noted in some cases. Weight loss was noted in more chronic cases. On examination, fever, dehydration, and upper abdominal tenderness were noted. An abdominal mass was noted in forty per cent of cases. Jaundice was present in six per cent of 116 cases. The stool is usually hematest negative. Hemoconcentration secondary to dehydration was the rule. Anemia and leukocytosis were common.

Radiologic evaluation should be diagnostic in most cases. Gastric dilitation or extrinsic pressure defects on the greater curvature may be demonstrated. An ill-defined mass was noted in some cases in plain films. The right psoas shadow was obliterated completely in some cases

and poorly defined in others. Barium contrast study shows obstruction, intralumenal filling defect in the duodenum, and "coil spring" sign in about half of the cases. X-rays may also show a "picket fence" configuration with or without a "coil spring" sign. The "picket fence" is the usual radiologic finding in patients under anticoagulant therapy.[2] Intravenous pyelogram may show ureteral displacement.[9]

The radiologic differential diagnosis includes intramural extramucosal neoplasm but the swelling of the mucosa proximal to the main defect and the length of the abnormal segment makes this diagnosis improbable. Barium study in cases of intussusception should reveal shortening of the duodenum and visualization of the constricted inner lumen. In the rare cases of retrograde intussusception the intramural defect is eccentric and there is no shortening of the duodenum. Other conditions such as pancreatitis, duodenal infarction, and lymphoma or other malignant tumors should present no problem in differential diagnosis to the experienced observer. Associated injury to other intraabdominal organs is uncommon and leads to high mortality.[6]

At the time of surgery free blood in the peritoneal cavity was noted in one-third of cases operated upon and may have been related to other associated intraabdominal injuries. Active bleeding was very rare.[3] In 100 cases reviewed by Devroede the portions of the duodenum involved were: the first portion — 16%; the second portion — 80%; the third portion — 80%; the fourth — 40%; and the proximal jejunum — 21%.[8] Organized or liquefied intramural hematomas were found subserosally in 65% of the cases and in the submucosa in 31% where simple evacuation was possible. About 5.4% were intramuscular and could not be adequately evacuated. Associated retroperitoneal hematoma were present in 9% of cases.[8]

Associated biliary or pancreatic involvement was first reported by Glass[7] in a one day old male infant who died of generalized hemmorrhagic diathesis. Obstruction of the common bile duct was noted in one-third and the pancreatic duct in one-fourth of the 125 cases reported by Jones et al.[3]

Conservative therapy with nasogastric suction and fluid and electrolyte replacement should be instituted when the hematoma is induced by clotting defects or when obstructive symptoms and x-ray changes were minimal.[8-3-5] Mortality is high with conservative treatment. Eleven out of twenty-three so treated in a series of 115 cases died.[3] Surgical intervention was employed in 80% of cases and re-operation was needed in 19% of the cases for persistent obstruction. Simple evacuation of the hematoma was used in 54.2% of cases and was successful in 86.5% of them. Gastrojejunostomy was combined with evacuation in 16.6% of cases.[3]

The overall mortality rate was 12.1% and most reported deaths were in high risk patients treated conservatively.

SUMMARY

The diagnosis and management of a case of intramural hematoma of the duodenum and upper jejunum secondary to blunt abdominal trauma have been presented and discussed with review of the literature. In this instance, the hematoma in the second portion of the duodenum caused obstruction of the common bile duct. Despite lack of clinical evidence of abdominal injury on initial examination, persistent vomiting and the appearance of abdominal tenderness and a mass on the third day after admission to the hospital prompted the performance of a barium study of the upper gastorintestinal tract. The results of this study led to the establishment of a correct diagnosis.

The lack of history of blunt injury to the abdomen and the delayed appearance of abdominal signs in this case has been a common observation in previous reports. This indicates the necessity of a high index of suspicion for this dangerous yet curable lesion.

Surgery is the treatment of choice in most cases of intramural hematoma of the duodenum and in this case simple evacuation of the hematoma led to an uneventful recovery.

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INDUCED EMESIS—A QUESTIONABLE PROCEDURE FOR THE TREATMENT OF ACUTE POISONING



LINCOLN CHIN, Ph.D.

Induced emesis, including mechanical stimulation of the pharynx, oral administration of various substances in water, oral administration of ipecac syrup and parenteral administration of apomorphine, have often times been shown to be ineffective and could be potentially hazardous. This report delineates the relative effectiveness and/or risks of the various procedures for the induction of vomiting.

One of the chief measures in the treatment of poison ingestion involves the prevention of further absorption of the poisonous substance from the gastrointestinal tract. Gastric lavage and induced vomiting are two commonly recommended general procedures for this purpose. The former procedure is usually employed in emergency rooms, whereas the latter procedure is often used as a first-aid measure by lay persons. Through the years numerous techniques have been recommended for the induction of vomiting despite lack of evidence regarding their effectiveness and safety. Some suggested means for inducing emesis include mechanical stimulation of the pharynx (following distention of the stomach with fluid); oral administration of various substances in water such as dry mustard powder, table salt (sodium chloride), copper sulfate, zinc sulfate, or tartar emetic; oral administration of ipecac syrup; and parenteral administration of apomorphine. In recent years some of these techniques have been shown to be ineffective or to be potentially hazardous. The purpose of this report is to call attention to deficiencies associated with emetic measures in the hope that health care personnel or first-aid workers will become aware of the relative effectiveness and/or risks of the various procedures for the induction of vomiting.

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Mechanical stimulation of the pharynx to induce gagging and vomiting seems, on the surface, to be advantageous in that it can be quickly performed in the home, that emesis would be immediate, and that it is free from side effects. However, Dabbous et al[1] have demonstrated that this method is highly unreliable for inducing emisis. These investigators reported that of 30 children treated at the Children's Hospital Emergency Room in Seattle, only 2 vomited from mechanical stimulation of the pharynx and the volumes of vomitus ejected were relatively small, approximately 2 and 4 ounces, respectively. It should be noted that every child was given 6 to 8 fluid ounces of carbonated beverage to distend the stomach before mechanical stimulation of the pharynx was attempted. Because dilution of a poison in the stomach with water may enhance gastrointestinal absorption of the chemical,[2] inadequate or lack of vomiting after the stomach has been distended with an aqueous fluid may increase the severity of intoxication. Furthermore, an attempt to evacuate the stomach by this or any other ineffective procedure may merely result in delaying proper treatment. Hence, mechanical stimulation of the posterior pharynx following distention of the stomach with aqueous fluid is not entirely without risk of aggravating a poisoning case.

There is no experimental or clinical data in the literature concerning the effectiveness of dry mustard powder and table salt as emetics. Cashman and Shirkey[3] consider these two substances to be approximately equal to mechanical induction of vomiting; i.e., a low degree of effectiveness and a high degree of safety. Although table salt is generally safe under normal dietary and proper medical uses, there is ample clinical evidence that it can be lethal. The toxicity of salt in infants was tragically demonstrated in the Binghamton disaster in which 6 of 14 infants died of salt poisoning because they received salt in their formulas instead of sugar.[4] Intra-amniotic injection of hypertonic saline solution for inducing abortion resulted in brain damage and death of 2 women.[5] In Australia 2 ehildren, approximately 2 years of age, underwent gastric lavage with hypertonic saline and died of hyper-

natremia.[6] Used as an emetic in the treatment of poisoning, overdose of salt has caused a number of deaths. A 75-year-old man who had ingested 60 mg of perphenazine and 750 mg of imipramine was made to drink 2 portions of salt solution, each consisting of 1 tablespoon of sodium chloride in 300 ml of water water.[7] He regurgitated approximately 150 ml of vomitus without retching and ultimately died of pulmonary edema secondary to hypernatremia. A 35-year-old woman who had ingested 5 g of thioridazine was administered orally 3,000 mEq of sodium chloride in approximately 4 liters of warm water.[8] She became hypernatremic and subsequently died. DeGenaro and Nyhan[9] described an incident involving a 2-year-old boy who was found playing with a bottle of propoxyphene (Darvon) from which 4 capsules were believed to be missing. His mother administered four 8 ounce glasses of saline solution, each containing 4 tablespoons of salt. Two hours later the child was taken to a hosiptal in a severe state of salt intoxication; his serum sodium and chloride levels were found to be markedly elevated (189 and 156 mEq per liter, respectively). Although serum concentrations of sodium and chloride were eventually reduced, the child never recovered cerebral funetion and died 9 days after entering the hospital. In another case, a 23-year-old woman who had ingested 30 chlordiazepoxide (Librium) capsules was administered salt and water by her husband.[10] Approximately 4 hours later her serum sodium concentration was found to be 214 mEq. Dialysis was performed, but to no avail; the patient died 18 hours after the incident began. Salt should not be recommended as a general antidote for the treatment of ingested poisons. It lacks emetic activity and the unsuspecting layman may be driven into administering toxic quantities of salt in a futile attempt to induce vomiting.

Copper sulfate is fast acting as an emetic, but there is concern regarding its reliability and safety.[3, 11] It is estimated to be effective in only 55% of cases.[3] Furthermore, even when it is effective in causing vomiting, it produces a significant elevation of blood copper levels.[11] Hencc, the possibility of copper intoxication exists, whether vomiting does or does not occur. If vomiting fails to occur, the probability of toxic effects will unquestionably be greater. As emetics, zinc sulfate and tartar emetic have similar deficiencies as copper sulfate.[3] Because of their inconsistent emetic effect and their toxicity, the metallic salts should not be used in the treatment of poisoning.

Apomorphine and ipecac syrup are considered as the most consistent drugs for causing vomiting and are considered as safe.[3] They are the most commonly recommended emetics for the removal of poisons from the gastrointestinal tract. Apomorphine requires parenteral administration and is not available to laymen as a first-aid measure for inducing vomiting. Therefore, if one eliminates the ineffective and potentially toxic emetics, there is no choice but ipecac syrup for the first-aid treatment of poisoning. However, it is disconcerting to note that neither apomorphine not ipecac syrup is reliable with regard to the amount of materials which they can evacuate from the gastrointestinal tract. It has been demonstrated in children that apomorphine produces a mean recovery of gastrointestinal contents of 31% with a range of 3 to 95% and ipecac sprup produces a mean recovery of 28% with a range of 0 to 78%.[12] Thus, it appears that even the best emetics available are of questionable efficiency in the general treatment of poison ingestion. Furthermore, induction of emesis is contraindicated or useless in certain poisoning situations; for example, if the patient is unconscious, if the poison is a petroleum distillate, a convulsant, or has a prominent antiemetic activity.

Despite glaring deficiencies, induced vomiting is the most commonly recommended first-aid method for prevention of further gastrointestinal absorption of an ingested poison. Some means for inducing vomiting are ineffective and other means are of questionable reliability. Some are intrinsically toxic and all are capable of causing secondary complications associated with dilution of the poison or with delay of proper treatment. Hence, serious consideration should be given to the use of procedures other than induced emesis for preventing further absorption of a poison from the gastrointestinal tract.

Activated charcoal is a proven nonsystemic antidote which may serve as an alternative to induced emesis in the treatment of poisoning. It is rapid acting and is highly effective in reducing the gastrointestinal absorption of many chemicals.[13, 14, 15] The view that it would be better to put aetivated charcoal in houschold medicine cabinets than ipecac syrup[16] appears to be well justified.

Statistics of 1430 Poisoning Cases Reported in Arizona During January — June 1972

		Number	Percent
AGE:			
Involved under 5 year age group		582	40.7
Involved 6 to 15 year age group		81	5.7
Involved 16 to 30 year age group		426	29.8
Involved 31 to 45 year age group		165	11.5
Involved over 45 year age group		113	7.9
Not reported		63	4.4
NATURE OF INCIDENT:			
Accidental		715	50.0
Intentional		550	38.5
Unknown		165	11.5
CAUSATIVE AGENTS			
Internal Medicine			
Aspirin		134	8.0
Other Analgesics		122	7.3
Barbiturates		130	7.8
Antihistamines		37	2.2
Laxatixes		9	.5
Cough medicines		15	.9
Tranquilizers		262	15.6
Others		339	20.3
	Sub Total	1048	62.6
External Medicine			
Liniments		12	.7
Antiseptics		20	1.2
Others		12	.7
	Sub Total	44	2.6
Household Preparation			
Soaps, detergents, etc.		16	.9
Disinfectants		30	1.8
Bleach		28	1.7
Lye, corrosives, drain cleaners		12	.7
Furniture & floor polishes		8	.5
	Sub Total	94	5.6
Petroleum Distillate			
Kerosene		2	.1
Gasoline		16	1.0
Others		21	1.2
	Sub Total	39	2.3
Cosmetics	Sub Total	57	3.4
Pesticides			
Insecticides		19	1.1
Rodenticide		1	.1
Herbicides		6	.4
	Sub Total	26	1.6
Paints, Varnishes, etc.	Sub Total	25	1.5
Plants	Sub Total	28	1.7
Miscellaneous	Sub Total	217	13.0
Unspecified	Sub Total	95	5.7
	TOTAL	1673	100.0

*The total number of causative agents exceeds the actual number of poisoning cases, since in certain individual poisoning incidents more than one agent was involved.

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THE PROBLEM OF R-FACTOR MEDIATED MULTIPLE ANTIBIOTIC RESISTANCE IN ARIZONA

ERIC E. M. MOODY, Ph.D.
DAVID W. MOUNT, Ph.D.

Resistance patterns in several recent cases of bacillary dysentery and typhoid fever in Southern Arizona are similar to those found in recent epidemics of these two diseases in Mexico and Central America. Laboratory methods used in the identification of these patterns and suggested antibiotic management are discussed.

SUMMARY

In three of four cases of bacillary dysentery due to *Shigella dysenteriae* type 1 and two of two cases of typhoid fever due to *Salmonella typhi,* an R-factor which confers resistance to chloramphenicol, streptomycin, sulfadiazine and tetracycline has been found associated with the strain of bacteria. At the present time, ampicillin is the antibiotic of choice for treatment of these infections.

R-factors may be described as small, extrachromosomal genetic elements in bacteria which confer upon them two characteristics; first, resistance to one or more antibiotics, and secondly, the ability to transfer the R-factor to certain other species by conjugation. The recipient strain usually acquires all the antibiotic resistances of the donor.[6]

R-factors may be found in and transferred *in vivo* and *in vitro* among most species of gram-negative enteric bacteria. The resistances of bacteria due to R-factors are derived from different

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mechanisms for different antibiotics. In the resistance to ampicillin, carbenicillin and cephalothin, resistance is produced by β-lactamases synthesized under R-factor control. Resistances to other antibiotics come from decreased permeability of the cell membrane to the antibiotic or from enzymes which biologically inactivate the antibiotic through chemical modifications.[6]

Most clinical isolates of enteric bacteria which are resistant to two or more antibiotics derive their resistances from an R-factor (6, Moody and Mount, unpublished observations). In the laboratory, the presence of an R-factor in resistant hospital strains is demonstrated by growing them in liquid culture together with an antibiotic-sensitive laboratory strain of *E. coli*. This so-called mating mixture is then spread on nutrient agar plates, which are incubated and tested for the presence of resistant *E. coli* colonies. Usually, the resistant *E. coli* colonies will have acquired the same resistance pattern as the resistant hospital strain, but there are important exceptions in which only some, but not all, resistances are transferred. Also, R-factors cannot be demonstrated in some multiply-resistant hospital strains, but in many cases this may be due to technical limitations (6, Moody and Mount, unpublished results).

Four cases of bacillary dysentery due to *Shigella dysenteriae* type 1 were seen in Arizona in the last four months of 1971. Three of the four strains were resistant to chloramphenical, streptomycin, sulfadiazine and tetracycline, and sensitive to ampicillin, cephalothin, colistin, gentamicin, kanamycin, nalidixic acid, and nitrofurantoin. We have shown that the three resistant strains all appear to carry the same R-factor which transferred resistance to chloramphenicol, streptomycin, sulfadiazine and tetracycline to a laboratory strain of *E. coli*.

The above cases seem almost certainly related epidemiologically to the 1969-1970 epidemic of bacillary dysentery due to *Shigella dysenteriae* type 1 in Central America and Mexico.[2, 4, 5, 8] Most of the strains isolated during the epidemic were resistant to chloramphenical, streptomycin, sulfonamides, and tetracycline, with a few being sensitive or showing resistance to only some of these antibiotics.[1] The multiple antibiotic-resistance of the majority of the epidemic strains has been shown to be due probably to the same R-factor[1, 3] which we have found in the three mutiply-resistant strains isolated from Arizona patients.

More recently, during the summer of 1972, two cases of typhoid fever from *Salmonella typhi* were seen in Southern Arizona. Both strains were resistant to the same four antibiotics (chloramphenicol - streptomycin - sulfadiazine - tetracycline) as the three earlier Arizona isolates of *Shigella dysenteriae* type 1, and insofar as our laboratory tests can detect, appear to carry an identical R-factor. The *Salmonella typhi* strains are also almost certainly related epidemiologically to the recent epidemic of typhoid fever in Mexico.[3, 7] Strains from this new epidemic have the same pattern of resistance as the Arizona strains of *Salmonella typhi* and carry an R-factor which is probably the same one that had been associated with most *Shigella dysenteriae* type 1 strains from Mexico.[3] It is of interest that this same pattern of resistance has also become widely associated with bacillary dysentery due to *Shigella flexneri* in Japan.[6]

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SHOCK AND THE PULMONARY FUNCTION TEAM

Fifty years ago, rest, saline, blood and morphine were accepted as the major elements in the treatment of shock. Fortunately, we are now observing that more patients with formerly lethal multiple injuries can be carried through their resuscitation to immediate definitive surgery due to teamwork.

Currently, three principal problems are seen to dominate the clinical management of shock in ill and injured patients. The current problems are:

1. The cardiopulmonary circuit and oxygen transport
2. Sepsis, and
3. Nutrition

Pulmonary shock, the breakdown of oxygen transport because of erythrocyte dysfunction, measurements from both sides of the pulmonary circuit, including blood gas studies and oxygenation are among the areas that the pulmonary function team support in this endeavor. Alimentation utilizing central venous feeding and antibiotics are additional effective methods in clinical management of shock.

The usefulness of the new breed of pulmonary function specialists in the management of critically ill and injured patients and in clinical shock is enormous. This type of capability needs to have wide dissemination if we are to reduce morbidity and mortality in the multiple injured patient.

John R. Green, M.D.

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President's Page

THE FUTURE OF ArMA AND BLUE SHIELD



JOHN J. STANDIFER, M.D.
PRESIDENT

There is a great deal of soul searching among some segments of the physician population about the future of the Arizona Medical Association's House of Delegates as the Corporate Body of Blue Shield. It is stated that Blue Shield is an insurance company and should be left alone by the doctors to run its affairs in a competitive manner as an insurance company. It is stated that the doctors have a conflict of interest by acting as the controlling body of the company that pays their bills. It is said that we get a bad public image because the public feels that our concern with Blue Shield is motivated only by the desire to get our bills paid.

The medical associations of Kansas and Oklahoma have ceased to serve as the corporate bodys of the Blue Shield plans in their states.

Blue Shield has, in some ways, not seemed to respond to the wishes of the medical profession. Under the control of Blue Cross an HMO has been formed after the Corporate Body of Blue Shield instructed Blue Shield not to do this. Service contracts continue to exist and Blue Shield does determine UCR limits for participating physicians.

All these arguments are pretty convincing that Blue Shield is not as responsive to the wishes and needs of the profession as we might feel it should be.

The involvement of ArMA with Blue Shield may still be a very important service of our organization in the implementation of care for our patients. We can have a very significant effect upon the activities of Blue Shield if we take the trouble to do so. By electing concerned individuals to the Board of Directors of Blue Shield and seeing that they are informed of the policies and desires of the physicians and the implications of actions taken by the board, we might contribute a great deal to the economics of health care in Arizona.

There is an effort being made at this time by Blue Shield to acquire experience in the foundation plans. This could be a very fruitful endeavor for both the foundations and Blue Shield. It is my feeling that this can best be implemented by a group of concerned physicians acting on the Blue Shield Board of Directors, supplying guidance in these directions. The expertise of many physicians in this cannot be ignored. To leave it to elected representatives of consumers would seem to me to be abandoning a very real opportunity not so far realized, to utilize a most impressive tool to supply our patients with high quality care at the lowest possible cost.

If we divorce ourselves from the direction of Blue Shield this will be a final and definative action. It would appear wiser to make a real effort to elect concerned and knowledgeable people to the Board of Directors of Blue Shield and then to keep them informed of the issues under consideration and the implications of decisions to be made — I think this is worth a try.



TELEVISION & CINEMATOGRAPHY AS SUPPORTING SERVICES IN THE COLLEGE OF MEDICINE

Medical Education is emerging as a new frontier. Challenges brought about by the contemporary demands for quality education for an ever increasing student population must be met. Old solutions for new problems will no longer suffice. Such a challenge is currently being faced by the Arizona Medical Center. To help meet the challenge, a Division of Medical Television-Cinematography has been organized and staffed by professional media technicians to assist and supplement the present medical curriculum and to supply new ideas which will aid in the education of students at the Arizona Medical Center. The goal of this service, directed by Mr. Robin Sandefur, is to offer support through the principle of applied instructional technology. This involves the integration of the television and film media into the curriculum of medical course work and to serve as an instructional tool in the clinical areas of the University Hospital.

The recent delivery of color television equipment to the department has increased its scope of operations. In addition to complete color studio productions, the mobile capabilities of the equipment provide increased flexibility throughout the Medical Center. The most used areas include the Main Auditorium, two main large group teaching rooms, the Clinical Departments of Pediatrics, Family and Community Medicine and Internal Medicine. Plans are underway to enable the equipment to be utilized within the surgical areas.

An equally important function of the department is to supply cinematography produetion capabilities. Professional 16mm film productions can be done in either black and white or color. The cinematography division is responsible for television support, as well as complete film productions. The film unit has been planned to adequately support the production of teaching packages for students in surgery and other clinical areas.

Several departments within the Medical Center have used Medical TV and Cinematography services extensively. The Department of Pediatrics has utilized the television medium in the training of third-year medical students. Video tape recordings are used during the first well-baby examination and patient history-taking experience. The Student and Professor are able to evaluate the progress made by viewing these tapes together at a later time. Near the end of their clerkship, students return for a second taping and playback sequence to evaluate their advancement. The program has proven to be quite successful and Dr. Vincent Fulginiti, Head of the Department of Pediatrics, is enthusiastic about the role of media in his teaching program.

The Department of Family and Community Medicine has found television useful for recording conferences and symposiums for delayed playback. Presentations on topics, such as pesticides and melancholia, have been recorded for inclusion in the basic curriculum of this department. On occasion, special guests are invited to discuss the various aspects of medicine as it relates to our society. Television can make a permanent record of these special tapings and any others which might be of interest. These tapes and others like them are now available for student and faculty use.

The cinematography division is producing films on a wide range of subjects. The Medical Center's "Orientation" film is designed for in-house and general public use and will communicate the philosophies and objectives of the Arizona Medical Center. The film will depict the Center's history and show how the interrelation of education, research and service works for the overall betterment of the community. Also, filming has begun in the Emergency Room for a series of productions on interstaff relations during cardiac arrest cases.

New ideas and projects for productions are constantly being accepted by the department. Designed to provide a service for the Arizona Medical Center, the Division of Medical TV and Cinematography is rapidly assuming a prominent place as a valuable supporting arm of the educational activities in the Medical Center.

Topics Of Current Medical Interest

THE DANES AND THEIR HEALTH SERVICE

DRY GULCH JAKE

Copenhagen was recently the host for the Fourth World Conference on Medical Education of the World Medical Association. This provided an opportunity to learn something specifically about the Danish medical delivery system, while the conference itself dealt with "what training should be provided for the health team of the future." Please note that the educators are not talking about the Health Team and this includes the whole gamut of technologists, administrators, and professionals of whatever field who are involved in the health delivery system.

Let us return to some interesting observations about health delivery in a highly socialized society such as Denmark.

A special number of Danish medical bulletins are devoted to a description of the services together with the training in medical education both for the professionals and the paramedical people.[1,2] The Bibliography will come at the very end. This, together with conversations with our hosts, is the origin of these observations.

The Danish Health Insurance is described as semi-public, semi-compulsory health security and is financed by individual premiums largely independent of income, and it finances treatment by general practitioners and private specialists and obstetric aid outside hospitals. Hospital care is free, and hospitals are municipally owned.

Rigshospital, Copenhagen is devoted to teaching and research. It receives patients from all over Denmark. Capacity 1000 beds doing for 1500. Each patient hospital day costs the government $173.00. Medical costs are high world-wide.

Since W.W. II, there has been, as elsewhere in the world, great strides in advancement of hospital services and of hospital physicians, whereas the number of general practitioners has remained constant.

For instance, in 1956, there were 2,300 hospital physicians; in 1970 there were 4,000, whereas the general practitioners were 2,100 in 1956 and 2,100 in 1970.

At least in Denmark, the Generalist has held his own, instead of declining as has occurred in our own country.

There is beginning a development of small group practice of general practitioners but it is usually one to three of them associated together and rarely are they assoeiated with specialists in that type of group practice.

Most of the fees for generalists is provided by health insurance and the population is divided into A-members who are 82 percent of the population with a family income of less than $7,000 and the B-members are 15% with higher income. Only a small percent are C-members 3%) and they have chosen not to be members of the public health insurance at all. Oddly enough, they say that this consists mainly of the very wealthy and the very poor. Poor C-members' health expenses are commonly reimbursed by the municipalities. The GP may be renumerated in different ways. In metropolitan Copenhagen, they receive a fee per capita but no fee for service; outside Copenhagen, they receive a combination of fee per capita and fee per service, each part consisting of about 50% of their income. In central Copenhagen, the general practitioners are appointed by the Health Insurance which is an arm of the government. Outside Copenhagen, every physician may set

up his own shop and this has lead to buying and selling of practices in these areas with the enrolled patients following along. Something similar to that occurs in Great Britain. The goodwill value of a typical solo practice may run in the neighborhood of $30,000 which is a typical annual income of a generalist. The investment of a well-equipped modern "surgery," or office as we would term it, usually amounts to about $36,000 per physician.

There are some interesting figures as to how often fully insured, or almost fully insured patients consult a physician. A recent survey showed that 1.6% of the population of Denmark contacted a general practitioner every working day. If something like this was to be obtained in the United States with a population of 200,000,000 then we might expect 3,200,000 of them to present themselves in the physicians offices each day. There must be some computer that already knows how many patients visit each day and it would be interesting to compare these two projections.

General practitioners in Denmark refer patients to hospitals but they do not control a patient after he once enters. The GP has no control of hospital beds.

As one physician states "hospital physicians often criticize the quality of information at referral, and, general pracitioners criticize the delayed information about discharged patients."

Medical training standards are high in Scandinavia, as in most parts of the Continent, except for Russia. To become a specialist may require five to seven or even eight years of post-graduate study. To be a licensed general practitioner in Denmark, two years of hospital service and 120 hours of post Graduate work are required. This is after medical school. This apparently is a deviation because until recently five years were required after medical school to become a general practitioner.

In addition to the general practitioners who are on the front line, they have a service of 'health visitors" and, as far as I can see they are principally concerned with well baby care. They have home nurses whose services are on a day basis. They plan to amplify this to a 24-hour coverage soon.

Midwives are highly trained and supervised and there are 600 of them in Denmark of which 400 work outside institutions.

Medical education in Denmark is being amplified. There are now three medical schools and these universities are open to all who have attended the gymnasium or have an education equivalent and the medical schools have no power of limiting or selecting the number of students. However, only about 60% of those who enter medical school complete it, so there is a high mortality. The Danish medical curriculum is designed as a basic doctor training area and as we have alluded to with general practitioners, they may spend two to five Post Graduate years specializing in that field. The other specialists may spend a minimum of five to six years training. The average time after graduation to certification, or authorization as they term it, is nine years.

A word about the paramedical courses in Denmark. Nurses train for 3½ years, nurses aids 10 months, midwives 3 years, hospital laboratory assistants 3 years, x-ray technicians 3 years, occupational therapists 3 years. I think it is quite evident that all of these figues are equal to or prolonged over the counterpart in this country and this probably leads to a higher type of ancillary care than we have fallen heir to in this country since World War II.

Now to return to the medical education conference itself. This was designed to come up with suggestions as to how the medical team of the future should be trained. So far as I could see since the predominant members of this August Body were physicians, the conversation all ran more or less to how should we train young physicians of the future, so the following statements are a few of the observations made by these world authorities and I shall not identify them individually but sometimes by country. Since all nations of the world, or nearly all were represented, there was a studious avoidance of any political discussion.

"The patient no longer fears death but prolongation of a vegetative life." Health education made immunization possible; now it should do the same for family planning. Renal dialysis can probably never meet the demand because of the over-burdening cost to most societies (England).

In Sweden, 70% of the psysicians are salaried, the attitude of the consumer has no influence on the medical delivery system except after the fact.

There are several areas of discussion in which the attitude of the medical student was dis-

cussed. I am not sure how much it was taken into consideration. For instance, they thought that a first year medical student more nearly represented the attitudes of the consumer than he did later on. He becomes disenchanted. There is an increased cynicism and this changes their motivation as they go through medical school. (They begin to assume the stance of physicians and to lose the lay viewpoint).

There was a good deal of discussion about how to get consumer group participation, and in areas where this participation has been tried or encountered, it usually has not altered the system but it was thought that the fact that they the consumers were "listened to" aided somewhat.

A speaker from Finland made a plea that more be taught about the diseases which kill and less about the exotic even if they are more interesting diseases. In Finland the leading causes of death are cardiovascular disease, cancer, accidents and suicide, in that order.

There is widening recognition that not all faculty members, in fact maybe a very small percentage of them, are really medical educators even though, on the faculty duty roster, this is supposed to comprise the principal duty. "Resistance to efforts to change teaching-learning processes is real and not necessarily related to the age of the faculty member. Outside educators, although not always welcome, can help to change outdated practices. General practitioners can help to narrow the huge gap between the modern medical center and the facilities in rural areas. New teaching methods must still be looked upon as nothing more than valuable experience." It apparently pervades the whole human race, we all resist change.

"Medical education has become rigid largely because of the undue influence of doctors on the curriculum content; members of the outside public should have a chance to contribute to this. At government level, there should be decisions on the changes required in medical schools as the objectives of medical education change, and medical schools should be regarded simply as participants in a total health service." (Sounds like a recent political convention in U.S.)

As to future patterns of professional practice, another workshop concluded, "the education of general physicians should be promoted and the call to specialism discouraged. Both are necessary but their proportions should be planned so that the more favorite specialist is not educated at the expense of the general physician."

Another group came up with the conclusion "that all of the schools in a university should be integrated and not separated.

In medicine, all teaching should be integrated and directed towards the education of the general physician, the goals being the broad ones of bringing medical care to the community and not the limited ones determined by separate departments."

About medical school administration, there was a recommendation that appointments of administrators should be limited usually to two terms of five years each and this group apparently wants medical schools to remain their same automonous selves as they have largely been in the past for they recommended that a medical school must be free to recruit its own staff and make its own decisions but they allowed that it should be helped by its students in this.

On international cooperation they felt that the present hit-or-miss system wasn't providing adequate guidance. They felt that advancement of medical education is hindered internationally by inadequate preparation of students linguistically and scientifically for exchange programs, inappropriate training abroad, and the problem of working in a highly specialized field in a new setting. They felt that this international exchange dealt too much with physicians and that these same exchange students were bewildered by the external trappings of centers in wealthier nations and this resulted in the draining of human resources from developing nations to the wealthier ones and that there was a lack of national or regional plan to monitor the flow of students into various fields.

To one whose life style is not academic, this dialogue of World Wide Educators, was interesting and informative.

As a final note your attention is again directed to the concept of the medical team, of which the physician may be a primary member, but a minority member, and "planet Earth" not an individual is now considered the patient.

REFERENCES

1. Svend, Juul: Primary Health Services in Denmark, 1972. Danish Medieal Bulletin, Volume 19 #6 1972, pages 181-186.
2. Beeker, Paul et al, Medical Edueation in Denmark, Ibid, pages 187-193.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

MEDICAL EDUCATION COMMITTEE

Meeting of the Medical Education Committee of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, on Thursday, November 8, 1972, convened at 6:55 p.m., Robert E. T. Stark, M.D., Chairman, presiding.

INTRODUCTION OF GUEST

Dr. Stark introduced Miss Lilly Kirschvink, Phoenix, representing the Arizona Chapter, Student American Medical Association. Miss Kirschvink is in her second year of medical school.

MINUTES

The minutes of the meeting held June 8, 1972, were approved as distributed.

1972 CERTIFICATE IN CONTINUING MEDICAL EDUCATION

Certificates

It was announced that a total of 298 Certificates have been awarded since July 1, 1972. Thirty-eight of these Certificates have been awarded to nonmembers. It is anticipated that additional 1972 applications will be received prior to the end of the year.

Certificate

A letter was received and reviewed from a member physician questioning the "1972" date shown on the Certificate. It is the physician's recommendation that the Certificate should have the date of expiration (1975) rather than the date of issue (1972). It was noted that the physician had also written to the AMA Division of Medical Education with the same suggestion for the Physician's Reeognition Award. Dr. Stark indicated that this subject had been discussed by the Advisory Committee to the Council on Medical Education during its last meeting on October 26th.

IT WAS MOVED AND CARRIED TO DEFER ACTION ON THE CERTIFICATE DATE UNTIL THE COMMITTEE HAS HAD AN OPPORTUNITY TO REVIEW THE AMA PHYSICIAN'S RECOGNITION AWARD'S CURRENT POLICY WITH RESPECT TO WHETHER THE EXPIRATION DATE, OR DATE OF ISSUE, APPEARS ON ITS CERTIFICATE.

SECTION ON ACCREDITATION

Dr. Seeley informed the Committee of the Section on Accreditation meeting held on Oetober 12, 1972, after receiving the letter from AMA approving ArMA's Accreditation Program in Continuing Medical Education for 1 year (provisional approval.) Procedures for implementing ArMA's Accreditation Program were discussed. It was determined by the Section on Accreditation that the "guiding principles" would be presented to chiefs of staff of all Arizona hospitals with a cover letter inviting them to become accredited by ArMA if they are engaged in continuing medical education activities which fulfill the standards in the guiding principles. Priority for accreditation would be given to the larger hospitals and limited to five or six surveys within the first year.

Mr. Robinson informed the Committee that the following hospitals had indicated an interest in beeoming accredited and a presurvey questionnaire had been sent to them:

St. Joseph's Hospital, Phoenix
John C. Lincoln Hospital, Phoenix
Palo Verde Hospital, Tucson
St. Joseph's Hospital, Tucson
Phoenix Baptist Hospital, Phoenix
Morenci Hospital, Morenci
Veterans Administration Center, Prescott
Arizona State Hospital, Phoenix.

THE REPORT FROM THE SECTION ON ACCREDITATION WAS RECEIVED FOR INFORMATION ONLY.

THIRD NATIONAL CONFERENCE OF STATE MEDICAL ASSOCIATION REPRESENTATIVES ON CONTINUING MEDICAL EDUCATION

Drs. Sheeley and Stark reported on the Third National Conference of State Medical Association Representatives on Continuing Medical Education, which they and Mr. Barnett attended in Chicago on October 24, 25, and 26. The topics of the Conference were:

1. Aecreditation of Continuing Medical Education by State Medical Associations.
2. Requirement of Continuing Mcdical Education Participation for State Medical Association Membership.
3. Peer Review as an Educational Necessity.
4. Self-Assessment — An Educational Tool.

REPORT RECEIVED FOR INFORMATION ONLY.

ArMA 1973 ANNUAL MEETING — PANEL ON CONTINUING MEDICAL EDUCATION

Dr. Stark reported that the Scientific Assembly Committee was most receptive to the Medical Education Committee's request for a panel discussion on continuing medical education during the 1973 Annual Meeting. However, on further consideration of this approach in communicating with ArMA's membership, Dr. Stark informed the Committee that he had written to the Chairman, Scientific Assembly Committee, proposing to display an exhibit rather than have a panel. The letter of September 19, 1972 to the Scientific Committee by Dr. Stark was reviewed by the Committee. RECEIVED FOR INFORMATION ONLY.

ACUPUNCTURE

A letter was received with copies of programs on the subject of acupuncture stating that acupuncture is a topic that has a high degree of interest for physicians because it apparently can be of a great deal of benefit as a therapeutic tool. A considerable amount of discussion ensued.

IT WAS MOVED AND CARRIED TO WRITE A LETTER TO THE PHYSICIAN TO DETERMINE WHETHER HE IS SPECIFICALLY REQUESTING ACCREDITATION OF ACUPUNCTURE SEMINARS AND COURSES.

COMMUNICATIONS

A letter was received from an Assistant Academic Vice President of ASU, in which he states that "there appcars to be a need, as well as a desire on the faculty's part to establish more offerings in the health allicd sciences, espccially programs that would be degree granting." He requests the Association's aid in assisting the University to determine what training programs are necded. Is a four-year degree in a health science necessary or beneficial? Are health allicd sciencs best offered in conjunetion with a mcdical school or does the Phocnix arca have enough hospitals and health allied facilities to compensatc for the lack of a medical school?

It was determincd that thc final qucstion was the

only one that this Association could reasonably assist with and we could state that experience has shown that health allied sciences have been offered successfully both in conjunction with the medical school and in areas without medical schools, in hospitals and health allied facilities, such as are present in Maricopa County.

OTHER BUSINESS

CESA Project

Dr. Wagner gave a progress report on the CESA Project. The Continuing Education Service Area Project is part of an overall health resources development program, which is designed to improve the continuing medical education opportunities for health manpower on a statewide basis. The goal of CESA is to provide a multidisciplinary system which will make it possible for all health professionals to participate in educational programs, so that their professional knowledge never becomes out-of-date. The programs will be within one hour commuting distance for every physician, nurse, and allied health professional and all fifteen service areas have been funded. The staff of the Arizona Regional Medical Program are working with the local professions of each service area to put them on an operational basis. RECEIVED FOR INFORMATION ONLY.

Next Meeting

It was determined that the next meeting will be held on January 25, 1973 at the College of Medicine, Tucson, Arizona.

Meeting adjourned 9:28 p.m.

Edward Sattenspiel, M.D.
Secretary

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc., held Saturday, November 18, 1972, at 810 W. Bethany Home Road, Phoenix, Arizona, convened at 3:21 p.m., John J. Standifer, M.D., President and Chairman, presiding.

MINUTES

The minutes of the meeting held 9/23/72 were approved as distributed.

ARIZONA DIABETES ASSOCIATION

The request for office space in the ArMA building from the above group was discussed. It was determined to recommend to the Board of Directors approval of such use as long as there is no expense to the Association, and so long as they agree to operate within the rules and regulations set forth by the ArMA's Executive Director.

FDA PANELS

Request from AMA for suggested FDA panelists to serve on "vaginal preparations" and "antiperspirant" panels was referred to the appropriate specialty groups.

AMA - NATIONAL LEADERSHIP CONFERENCE

Attendance at the first AMA National Leadership Conference on 2/16-18/73 was discussed. It was determined that all members of the Executive Committee and staff who are available should attend this conference at Association expense.

BOMEX — RENTAL

The Board of Medical Examiners' request for additional rental space was referred to the Board of Directors, with a recommendation that it be granted.

AMA LEGAL COUNSEL MEETING

It was reported that Mr. Kenneth Reed of Snell & Wilmer will represent the Association at the 11/26/72 meeting called by AMA's General Counsel.

RICK DE MONT

The suggestion that this Association initiate action to present a gold medal to Rick DeMont was delayed for further study.

ARIZONA MULTI-COUNTY FOUNDATION FOR MEDICAL CARE

It was agreed that the Association would assist the subject organization in its organizing efforts. That expenses so incurred would be aecumulated for possible reimbursement at a later date.

ARIZONA HEALTH MANPOWER FORUM

The committee approved our further participation in the subject program scheduled for 1/19-20/73.

PRACTICE MANAGEMENT SEMINARS

Mr. Robinson reported on the AMA development of Practice Management Seminars for interns and residents, and the possibility that they will be made available to state Associations. It was agreed that we arrange to have someone audit the next scheduled seminar to determine their applicability for ArMA sponsorship in Arizona.

PURCHASE OF VIDEO EQUIPMENT

The request from the Arizona Society of Otolaryngology that ArMA purchase certain video tape equipment as part of our audio-visual equipment inventory, was discussed. It was determined, due to financial considerations, not to proceed at this time.

BOARD OF DIRECTORS

The committee reviewed the agenda of the Board of Directors meeting for 11/19/72, and prepared various recommendations.

Meeting adjourned 5:06 p.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

The meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, November 19, 1972, a quorum being present, convened at 10:16 a.m., John J. Standifer, M.D., President and Chairman, presiding.

WELCOME

Dr. Standifer welcomed the County Society presidents and the several guests.

MINUTES

Minutes of the meeting held September 24, 1972, were approved with one correction to be made on Page 10, item D. — starting time for Blue Shield Corporate Body first meeting was changed from 3:30 a.m. to 3:30 p.m.

ArMPAC BOARD OF DIRECTORS

Don V. Langston, M.D., reported that ArMPAC membership is at an all-time high, exceeding 800 members. He also reported that ArMPAC political contributions

were 100% successful. That is, each candidate who received a contribution from ArMPAC was re-elected. AMPAC's success rate was 82.5%.

Dr. Langston also announced that ArMPAC will be holding a reception on February 9, 1973, for the Board of Directors of AMPAC, who will be meeting in Phoenix. All ArMA Board members will be invited.

BOARD OF DIRECTORS

50-Year Club Memberships

It was moved and carried to approve 50-Year Club membership status to Clarence G. Salsbury, M.D., and Dushan V. Medigovich, M.D.

Building Fund Assessments 11/17/72

It was reported that the following members have not paid their 1972 building fund payment:

Ashford, Rowell S.	(Maricopa)
Cremer, Mabelle A.	(Maricopa)
George, Edward D.	(Maricopa)
Harris, Albert J.	(Maricopa)
Hill, Richard J.	(Maricopa)
Kruglick, John S.	(Maricopa)
Lloyd, Robert C.	(Pima)
Marquez, Alberto	(Pima)
Martin, John A., III	(Maricopa)
Merkling, Fred C.	(Maricopa)
Parks, William S.	(Maricopa)
Rangel, Hugo	(Maricopa)
Richter, Herschel M.	(Maricopa)
Roe, Aubrey	(Maricopa)
Rosenquist, R. W.	(Maricopa)
Ryan, Martin J.	(Maricopa)
Silverstein, Martin E.	(Coconino)
Viard, Walter S.	(Yuma)
Waldmann, Edward B.	(Maricopa)

The Executive Director was directed to assign the above names to appropriate District Directors for follow-up.

EXECUTIVE COMMITTEE

Financial Statement period ending 10/31/72

Dr. Scott reviewed the subject financial statement, pointing out that we are $51,491.58 under budget at this time, which is much better than the position we were in last year at this time. He also pointed out that we will be borrowing $8,000.00 less this year than last year.

Membership Classification changes were approved

(a) Stanley B. Crosbie, M.D., Service to Associate — Account retirement — Dues exempt — Effective 1/1/73.

(b) Ernest E. von Pohle, M.D., Active to Active over 70 — Account age — Dues exempt — Effective 1/1/73.

(c) A. I. Ramenofsky, M.D., Active to Associate — Account retirement — Dues exempt—Effective 11/19/72.

(d) Robert D. Smith, M.D., Active to Active over 70 — Account age — Dues exempt — Effective 1/1/73.

(e) Edward Roth, M.D., Active Member Dues Exempt — Account financial hardship — for years 1972 & 1973.

AD HOC COMMITTEE ON ARMA PROGRAM DEVELOPMENT AND ADMINISTRATIVE EVALUATION

At was moved and carried to direct the By-laws Committee to present a resolution to the House of Delegates changing the Membership Classification of interns and residents from Associate Members to Active Members. It further directed that a dues of $10.00 be assessed to cover the cost of ARIZONA MEDICINE, and that the constituent county medical societies be informed of this proposed change in the By-laws so that they may consider changing their By-laws in the same manner to encourage the active participation of interns and residents in county society and State Association policy development.

BENEVOLENT AND LOAN FUND COMMITTEE

William F. Kivett's letter expressing appreciation for receipt of ArMA's $500.00 scholarship grant was received.

FINANCE COMMITTEE

Letter from SAMA (Arizona Chapter) expressing appreciation for ArMA's decision to provide them $200.00 each year was received.

LEGISLATIVE COMMITTEE

The suggestion that this Association invite members of the Arizona Osteopathic Medical Association to be members of our legislative committee, and that we seek their official approval to represent them in the Arizona Legislature was discussed.

It was moved and carried to approve the above concept and that the Executive Director is to pursue the matter further with the Arizona Osteopathic Medical Association.

PROFESSIONAL COMMITTEE

Methadone Maintenance Programs

It was moved and carried to adopt the following resolution on Methadone Maintenance programs:

WHEREAS, Methadone Maintenance programs have proven to be one of the most effective treatment models for the heroin addict; and

WHEREAS, there are estimated to be 3000 heroin addicts in Maricopa County and 5000 in Arizona, and

WHEREAS, there are approximately 150 heroin addicts under Methadone Maintenance treatment in Arizona, therefore be it

RESOLVED, to support the establishment of additional Federally approved Methadone Maintenance programs in Arizona, and be it further

RESOLVED, that treatment of heroin addicts through Methadone Maintenance programs be limited to Federally approved treatment centers.

Planned Parenthood Association of Phoenix, Inc., request regarding treatment of minors

The request of the subject organization and the action of the Professional Committee as follows was discussed: "It was moved and carried that the Professional Committee recommend to the Board of Directors of the Arizona Medical Association support of all three questions asked by the Planned Parenthood Association of Phoenix, Inc., as follows: Number 1. Would you favor an across-the-board policy of treatment in all medical areas? Response — The ArMA would favor such a policy. Number 2. Would you support our policy of extending contraceptive services to minors if it were included in a new Family Planning Bill in the Legisla-

ture? Response — The ArMA would support such a policy. Number 3. Would you support a bill based on the type of legislation passed in Minnesota? Response — The ArMA would support such legislation."

It was moved and carried to change the word "support" to "favor" in the responses to Number 2 and Number 3 above, and the Planned Parenthood Association be so advised, yith the additional statement that support of proposed legislation is contingent upon review of the actual drafted bill.

PUBLIC RELATIONS COMMITTEE

Acupuncture Legislation

The committee's recommendation that the Association support enactment of proposed legislation referenced title "Authorized Use of Acupuncture" Rough Draft Folder Number 162 Dated 9/28/72 was discussed.

It was moved and carried to support legislation to insert the following paragraph in Section 32-1421, Arizona Revised Statutes: 10. The performance of acupuncture by any person under the supervision of a doctor of medicine in an approved medical school or any research facility approved by the Board of Medical Examiners for the primary purpose of scientific evaluation. Any medical school or any research facility approved by the Board of Medical Examiners which conducts acupuncture research under this paragraph shall annually, during the first week of the legislative session, submit a report to the President of the Senate and Speaker of the House on such research indicating quantified results, the suitability of acupuncture as a therapeutic tecehnique and performance standards for persons practicing acupuncture.

A.M.A. DELEGATES REPORT

Delegates qualifications and tenure

Dr. Cloud reviewed AMA's letter of 10/27/72 which read as follows:

"At the Annual Convention of the AMA in San Francisco, the House considered Resolution 18 which read:

Resolved, That Chapter IX, Division 3, Section 3, Article B, of the American Medical Association Bylaws be amended to add after the second sentence, which ends 'are selected each year,' the following sentences:

No delegate may serve for more than a total of four 2-year terms consecutive or not. Service for an alternate shall not count against a delegate's tenure, nor shall any portion of an unexpired term that a delegate is appointed to fill prior to his own election.; and be it further

Resolved, That this amendment take effect on January 1, 1973 wtih the various state delegations adjusting their delegate membership by appropriate action in order to conform.

After due consideration, the House adopted the following Substitute Resolution 18;

Resolved, That the House of Delegates recommends to all constituent associations and scientific sections that they examine now and periodically the conditions, qualifications, methods, procedure, tenure and related aspects of the election of their delegates to the AMA House of Delegates.

As instructed, your Speakers are bringing this House recommendation to your attention."

It was moved and carried to express a vote of confidence in our present delegates and alternate delegates and in the methodology presently used to elect them. The American Medical Association is to be advised of this action.

AMA Reorganization

Dr. Cloud reported on the recent changes made by the AMA Board of Trustees summarized as follows:

1. Reduced the size of its councils and committees to 7 and 5 members, respectively, except where the structure of the council or committee is essentially one of representing independent organizations. The achievement of this constructive and desirable objective will be by attrition.

2. Reduced the maximum tenure of service on councils and committees to 7 and 5 years, respectively, to allow for the necessary infusion of new members and new ideas.

3. Directed that meetings of councils and committees be held in Chicago at AMA headquarters unless a definite need exists for nonconformity.

4. Directed its councils and committees to reduce the number of meetings to those which are absolutely essential.

5. Urged minimal usage of consultants and only on an ad hoc basis.

RECEIVED.

OTHER BUSINESS

County Society Visitations

Dr. Dudley reported on his visit to Santa Cruz Medical Society in conjunction with Edwin F. Smith, AMA Field Service, indicating an interesting and active meeting.

Seymour I. Shapiro, M.D., reported on his recent visit to the Graham County Medical Socicty, where one of the subjects discussed was the AMA's reported attitude toward physicians serving in the military, especially those who have been drafted. It was reported to Dr. Shapiro that the AMA apparently is giving a feeling of "no interest" to these physicians.

It was moved and carried to refer this matter to the Professional Committee for investigation and study, suggesting that they confer with the physicians in Graham County originating the comments to Dr. Shapiro.

Physicians on Hospital Governing Boards

Dr. Chisholm reported that he asked for an up-date on the activity started in 1966 to increase the number of physicians on hospital governing boards.

Mr. Robinson reported that as of April 1968, eighteen hospitals reported physicians on boards, twelve reported no physicians on boards, and nine not responding.

As of November 17, 1972, thirty-one hospitals reported physicians on boards, thirteen hospitals reported no physicians on boards, and seven not responding.

It was reported that the following resolution will be introduced in the AMA House of Delegates meeting in Cincinnatti on November 26, 1972:

"Whereas, The membership of the American Urological Association, Inc. is concerned with the delivery of the finest medical care in our hospitals to the consumer public; and

Whereas, The American Urological Association, Inc. has approved a similar resolution on May 19, 1971; therefore be it

Resolved, That the American Medical Association, through its Commissioners to the Joint Commission on Accreditation of Hospitals, support a requirement for accreditation that medical staff members in active practice should comprise at least 25 percent of the membership of hospital governing boards; and be it further

Resolved, That the representative should be selected from nominees in active practice chosen by members of the active staff; and be it further

Resolved, That the American Medical Association enlist the support of other organizations represented on the Board of Commissioners of the Joint Commission on Accreditation of Hospitals toward this end."

It was moved and carried to urge ArMA's delegates to vote in favor of the above resolution.

Arizona Diabetes Association

The subject organization's request for temporary office space in the Association building was reviewed.

It was moved and carried to approve the request with the stipulation that it is for a period of not more than six months and they agree to such use rules as may be promulgated by ArMA's Executive Director.

Board of Medical Examiners' Request for Additional Space

Mr. Robinson reported that the Board of Medical Examiners has requested to rent additional space in the building, specifically that room known as " the small conference room." He indicated that such rental would generate $1300.00 new annual revenue, and that estimates for installation of necessary alterations would cost about $850.00.

It was moved and earried to approve this request.

THE BOARD WENT INTO EXECUTIVE SESSION AT THIS POINT

It was moved and carried that as an expression of appreciation for past loyalty, devotion and excellent administration, Mr. and Mrs. Bruce E. Robinson (ArMA's Executive Director and his wife) be guests of the Association on the next ArMA-sponsored intrav tour (Scandinavian eountries in July 1973) should that tour generate the interest and revenue to cover the costs involved.

Meeting adjourned 12:35 p.m.

Edward Sattenspiel, M.D.
Secretary
Bruce E. Robinson
Executive Director

OCCUPATIONAL HEALTH COMMITTEE

The meeting of the Occupational Health Committee of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, on December 2, 1972, convened at 10:14 a.m., Joseph M. Hughes, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting held 12/4/72, were approved as distributed.

ICA FEE FREEZE BY IRS

Legal Counsel Frederick K. Steiner reviewed the various steps taken to date to get a reversal of the IRS ruling that prevents physicians from charging the approved ICA fee schedule.

He stated that we have gone through all the various levels of the IRS, and are presently appealing directly to the Price Commission in Washington, D. C. Because of the current political situation, and attitude toward health expenses, little hope was expressed about the success of the appeal – RECEIVED.

PEER REVIEW

Mr. Robinson reported that our offer to provide peer review services to the various ICA insurance carriers has elicited zero requests since the offer was first distributed to the carriers on December 14, 1971.

ONE-DAY HERNIORRHAPHY

Dr. Leonard reported on the subject matter as follows:

"After being charged with making a report on this subject to the Committee last winter, I embarked on a determined effort to pursue the subject on a local level as well as through national reports and contacts. Publications currently available on the subject are from Contemporary Surgery, the issues of July-August, 1972 and November-December, 1972. In addition, several articles by Dr. Carroll Bellis of Long Beach, California, and Joseph Caster of Los Angeles in various surgical journals are reviewed. Dr. Irving Lichtenstein reports on over one thousand consecutive herniorrhaphies done by this technique.

Several members of the local surgical community were contacted and asked to give me their opinions and I have received reports from about ten surgeons. The local physicians feel (at least among the 10 reporting) that this is a feasible project and should be studied further and undertaken to determine whether it will stand up. The basic idea is a surgical repair of a hernia done under local anesthesia, with the patient being released from the hospital on the day of surgery or the following day. Complications or problems in the hernia would preclude immediate discharge. This type attack on hernias is very good when done on young men particularly, and has been tried in the service in both World War II and the Korean and Vietnam Wars with essentially good results.

Dr. Lichtenstein reports on all types of hernia repair, including direct and indirect, with local anesthesia and a repair done with a mesh or without, but always with a relaxing rectus sheath incision to take tension off the inguinal hernia repair. Most of the other surgeons report the same procedure. Most of the surgeons in the literature that were contacted are enthusiastic.

There is a problem in that almost without exception all men reporting to me in their local experiences indicate there has been great reluctance on the part of those covered with Industrial or other insurance to return to work in less than eight weeks. There has developed a feeling that this is "owed to the recipient." It is sometimes abetted by the policy of some companies to supplement the Industrial benefits up to the point the patient receives his normal wages and there is no incentive for him to return to work.

Amongst private patients there appears to have been a not inconsiderable experience with the One Day Herniorrhaphy. I have tried it and it works exceptionally

well, especially in the younger men with indirect inguinal hernias which are all essentially congenital hernias. However, even with direct hernias of the type due to injury or to recurrence following repair of indirect hernia, these patients can be motivated to return to work or get back to duty a lot more quickly than has been the custom in the past. Again, the existence of covering insurance almost precludes, at least in local experience, any return to work before a month and more often two months have passed.

I have available for your perusal the references and letters from local physicians in regard to this type procedure. I would urge that the Industrial Commission or the Medical Society or both make a study of this subject with the idea of bringing to publication an end result article which encourages the procedure further on a local level.

Conclusions:

1. The One day Herniorrhaphy under local anesthesia is generally well tolerated and the patient can return to work in a much more abbreviated period of time when this particular technique is employed.

2. Under general anesthetic with a recovery period in the hospital being necessary because of the anesthetic, it is felt that a quicker departure from the hospital and an earlier return to work would give the patient a much better chance for a permanent cure of his hernia.

3. The above conclusions are drawn on the basis that these hernia repairs be done by a trained and knowledgeable surgeon who is familiar with this technique and its objective."

Dr. Leonard agreed to prepare an article on this subject for admission to Arizona Medicine.

It was agreed that Dr. Leonard would also approach the Phoenix and Tucson Surgical Societies with the idea that he make a presentation to each of these groups on this subject.

CONGRESS ON OCCUPATIONAL HEALTH

Dr. Hughes reported on the subject meeting held 9/10-12/72, as follows:

"The Sunday meeting of the state chairmen was only attended by about 20 people. The main topic was the President's Commission on Workmen's Compensation Laws which studied the problem for about a year. A seventy-five page document is ready and it will be followed by three more supplemental volumes. The Commission concludes that the present laws are inadequate in coverage (especially rehabilitation) and are inequitable between, and within, states. The Commission does not see any advantage to a Federal takeover, e.g., Social Security, and will recommend that the states continue to function; however, they will be advised to "clean up their house." An interim commission will be appointed to continue observation of the system until 1975 at which time the system will be re-evaluated.

The Commission suggested that the maximum benefits be two-thirds of the actual weekly wage by July 1973, and 100% of the average weekly wage by 1975. They felt that the states should tie these percentages to the cost of living, that there be no arbitrary limits on duration or total benefits, and the worker should be able to file in the state where hired or the state where injured. It is their feeling that coverage should be compulsory rather than elective and that there be full coverage of occupational diseases (and not limited to a schedule of diseases).

Doctor Henry Howe, Secretary of the Council on Occupational Health, submitted that Arizona, Alaska, and Hawaii are the only three states which have a benefit structure which is up to date (they all have high wages also).

It is becoming apparent that the legal definition of injury will be all-encompassing in the future and thus most accidents will be covered in this manner.

The meetings on Monday and Tuesday were much better attended. Mr. George C. Guenther, Assistant Secretary of Labor, spoke and, in my opinion, continues to take a reasonable approach to OSHA. They are continuing to refine standards; e.g., throw out unrealistic standards or modify questionable areas. It is interesting to note that only 5% of citations issued have been protested and there has been little misuse of the employee's privilege of registering complaints (compliance officers have been very careful not to get caught in union-management disagreements). Mr. Guenther submitted that a rule has been proposed that will exempt employers with less than eight employees from the requirement of record keeping.

Mr. George H. R. Taylor, Executive Secretary of the AFL-CIO, spoke and indicated that the unions feel the Act is not fully funded or staffed and are of the opinion that this will destroy the program. They are suspicious of state programs and will attack states with so-called "paper progarms." It is apparent that the unions are exerting a lot of effort to put some teeth into enforcement of the Act.

Many investigations of occupational disease are being carried out; e.g., silicosis, asbestos, and the investigators are turning to the unions because they have good records (a man may work for many different companies, but he usually belongs to the same union). Workers in suspect industries can be traced and I think that these studies will prove to be very profitable."

Dr. Hughes also reported that subsequent to the above meeting the Board of Trustees of the AMA has consolidated the Council on Occupational Health with other AMA councils as part of an economy effort — RECEIVED.

SOUTHWEST RECOVERY CENTER

Dr. Edwards reviewed the background and history of the subject matter for the new members of the committee.

He reported that he and Dr. Eugene J. Ryan are in the process of establishing such a center under the name "Southwest Disability Evaluation Center," and that he would report further progress at future meetings.

OTHER BUSINESS

Next meeting

A poll of the committee members indicated that future meetings should be held in the afternoon.

Meeting adjourned 11:46 a.m.

Edward Sattenspiel, M.D.
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Future Medical Meetings

FIRST ANNUAL SURGICAL SYMPOSIUM

January 14-19, 1973
Camelback Inn, Scottsdale, AZ

SPONSOR: Phoenix Surgical Society,
Tucson Surgical Society,
College of Medicine, Univ. of Arizona

CONTACT:
Darrell Minnig, M.D., Program Dir.
2021 North Central Ave.
Phoenix, AZ 85004

Approved for 28 required hours toward the ArMA Certificate in Continuing Medical Education.

EKG INTERPRETATION

January 15, 1973
Six Monday evenings for two hours
Tucson Medical Center
North Wing Conference Room
Tucson, AZ

SPONSOR: Southern Arizona Chapter of
Arizona Academy of Family Practice

CONTACT:
C. James De Sando, M.D., Program Dir.
601 North Wilmot Road
Tucson, AZ 85716

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ARIZONA THORACIC SOCIETY

Winter Meeting
Friday, January 26, 1973

SPONSOR: Arizona Thoracic Society

CONTACT:
Arizona Thoracic Society
1239 E. McDowell Rd.
Phoenix, AZ 85006

16th ANNUAL CARDIAC SYMPOSIUM

January 19-20, 1973
Mountain Shadows, Scottsdale, AZ

SPONSOR: Arizona Heart Association

CONTACT:
Edward Waldmann, M.D.
c/o Arizona Heart Association
1720 East McDowell Road
Phoenix, AZ 85006

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9TH ANNUAL LABOR-MANAGEMENT CONFERENCE ON COLLECTIVE BARGAINING AND LABOR LAW

February 8 & 9, 1973
University of Arizona
Student Union Ballroom

SPONSOR: College of Business & Public Administration
University of Arizona

CONTACT:
Mr. John Swenson
Coordinator of Business Conferences
BPA College
University of Arizona
Tucson, AZ 85721
Phone: 884-1252

SYMPOSIUM ON CANCER

February 9-10, 1973
Sheraton-Pueblo Inn
Tucson, AZ

SPONSOR: Arizona Chapter, American College of Surgeons and
Arizona Society of Anesthesiologists

CONTACT:
Peter J. Whitney, M.D.
Craycroft Medical Center
Craycroft & 2nd Street
Tucson, AZ 85711

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SIXTH ANNUAL SOUTHWESTERN CLINICAL PHARMACY SEMINAR

February 9-11, 1973
Hilton Inn, Tucson, AZ

SPONSOR: University of Arizona, College of Pharmacy

CONTACT:
Henry W. Winship, III, Ph.D.
College of Pharmacy
The University of Arizona
Tucson, AZ 85721

SOUTHWESTERN SEMINAR ON NEUROMUSCULAR DISEASES

February 16-17, 1973
University Hospital, Main Auditorium
Tucson, AZ

SPONSOR: University of Arizona College of Medicine

CONTACT:
Lawrence Z. Stern, M.D.
Dept. of Neurology
Arizona Medical Center
Tucson, AZ 85724

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DAY OF ENDOCRINOLOGY

March 3, 1973
Camelback Inn, Scottsdale, AZ

SPONSOR: St. Joseph's Hospital and Medical Center

CONTACT:
Jay W. Smith, M.D.
350 W. Thomas Road
Phoenix, AZ 85013

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4TH INTERNATIONAL CONGRESS OF LYMPHOLOGY

Diseases of Lymphatics and Lymph Nodes

March 6-10, 1973
Tucson Community Convention Center,
Tucson, AZ

SPONSOR: U of A College of Medicine and
International Society of Lymphology

CONTACT:
Drs. Maryls & Charles Witte
Dept. of Surgery
Arizona Medical Center
1501 N. Campbell
Tucson, AZ 85724

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MEDICAL-DIETETIC SYMPOSIUM THE HEART OF THE MATTER

March 29-30, 1973
Arizona Medical Center, Tucson, AZ

SPONSOR: U of A College of Medicine &
United States-Mexico Border Public Health Assoc.,
& Nutrition Council of Arizona

CONTACT:
Otto F. Sieber, Jr., M.D.
Arizona Medical Center
Dept. of Pediatrics
Tucson, AZ 85724

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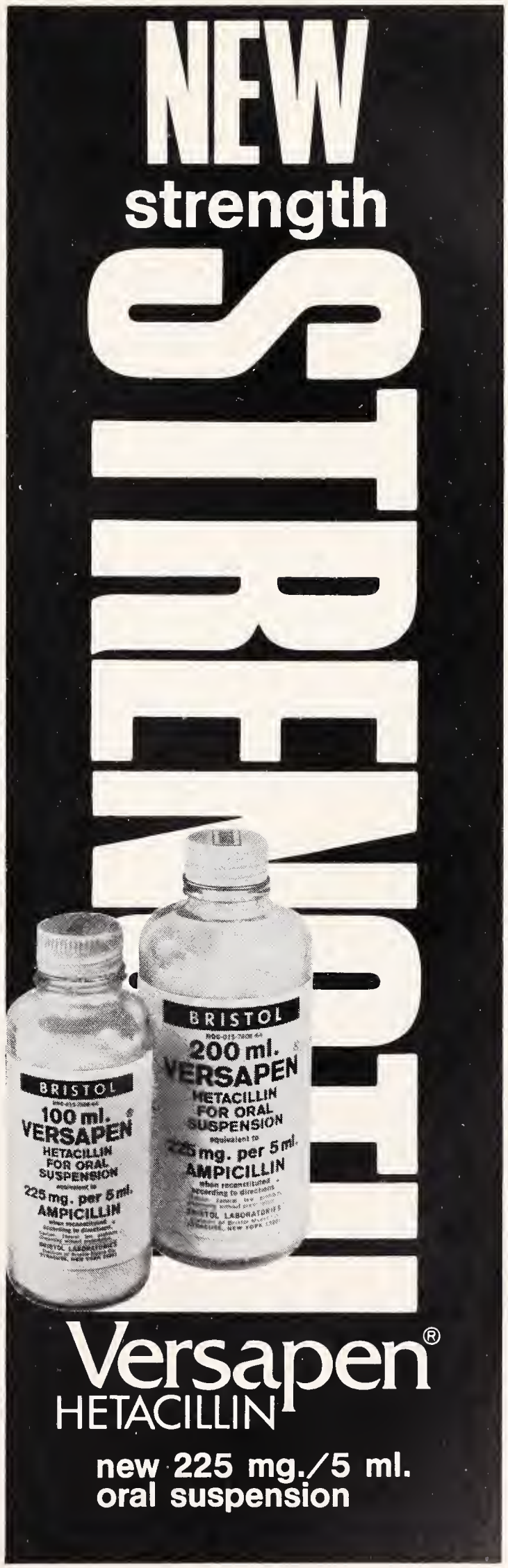
82ND ANNUAL ArMA SCIENTIFIC SESSION

April 26-27, 1973
Safari Hotel, Convention Center,
Scottsdale, AZ

SPONSOR: Arizona Medical Association and
U.C.L.A. College of Medicine

CONTACT:
Arizona Medical Association, Inc.
810 W. Bethany Home Road
Phoenix, AZ 85013

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STANFORD UNIVERSITY SCHOOL OF MEDICINE

POSTGRADUATE MEDICAL EDUCATION COURSE

— In HAWAII —

MANAGEMENT OF THE SURGICAL PATIENT

May 13 to May 20, 1973

MAUNA KEA

BEACH HOTEL

(The Laurence Rockefeller Resort on the Island of Hawaii)

This course consists of a series of lectures and informal conferences dealing with the practical aspects of the management of a variety of surgical problems. Arrival in Hawaii will be on Sunday, May 13, with departure on Sunday, May 20. Sessions will be held Monday through Friday from 9 a.m. to 12 noon, with a panel discussion on Saturday morning. Elective presentations will be offered Monday through Friday from 7 to 8 a.m.

COURSE OUTLINE

Respiratory failure in surgical patients
Chest injuries
Head and spine injuries
Antibiotic therapy
Plastic surgery for general surgeons
Drainage of the urinary tract
Dissecting aneurysms
Pediatric surgery for general surgeons
Septic shock
Management of sarcomas
Practical estimates of renal function
Myocardial revascularization
Management of intractable pain
Management of urinary tract infections
Office surgery
Management of vascular problems
Primary breast carcinoma
Multiple trauma

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Hotel: Room reservations for the Mauna Kea Beach Hotel at Kamuela, Hawaii, will be made through the Office of Postgraduate Medical Education at Stanford and will be confirmed to the registrant upon receipt of $100 deposit. (Beachfront room, Modified American Plan with breakfast and dinner—$95 per day for two.) A special program will be organized for accompanying wives and children.

Travel: Round-trip transportation at special group rates prevailing at time of departure (government-controlled rate structure) will be available between West Coast cities and Kamuela (direct flight to Hilo). Group departures from San Francisco, Los Angeles, and Seattle or Portland will depend on number of registrants from those areas. Official travel agent is Leo T. Sides, Leo T. Sides Travel Service, 87 Stanford Shopping Center, Palo Alto, California 94304, (415) 321-1111, who will contact registrants to make group arrangements or coordinate other pre- or post-meeting travel as desired (inter-island/Orient/Pacific).

APPLICATION FORM

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SOUTHERN ARIZONA CHAPTER OF ARIZONA ACADEMY OF FAMILY PHYSICIANS

4th Tuesday of Each Month
U of A College of Medicine, Tucson, AZ

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CONTACT:
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Univ. of Arizona
Arizona Medical Center
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CARDIOLOGY SEMINAR & CLINICAL CONFERENCE

Every Thursday Evening
6:45-7:45, 8:00-9:30
Auditorium, Univ. Hospital

SPONSOR: Section of Cardiology
University of Arizona

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Tucson, Arizona 85711

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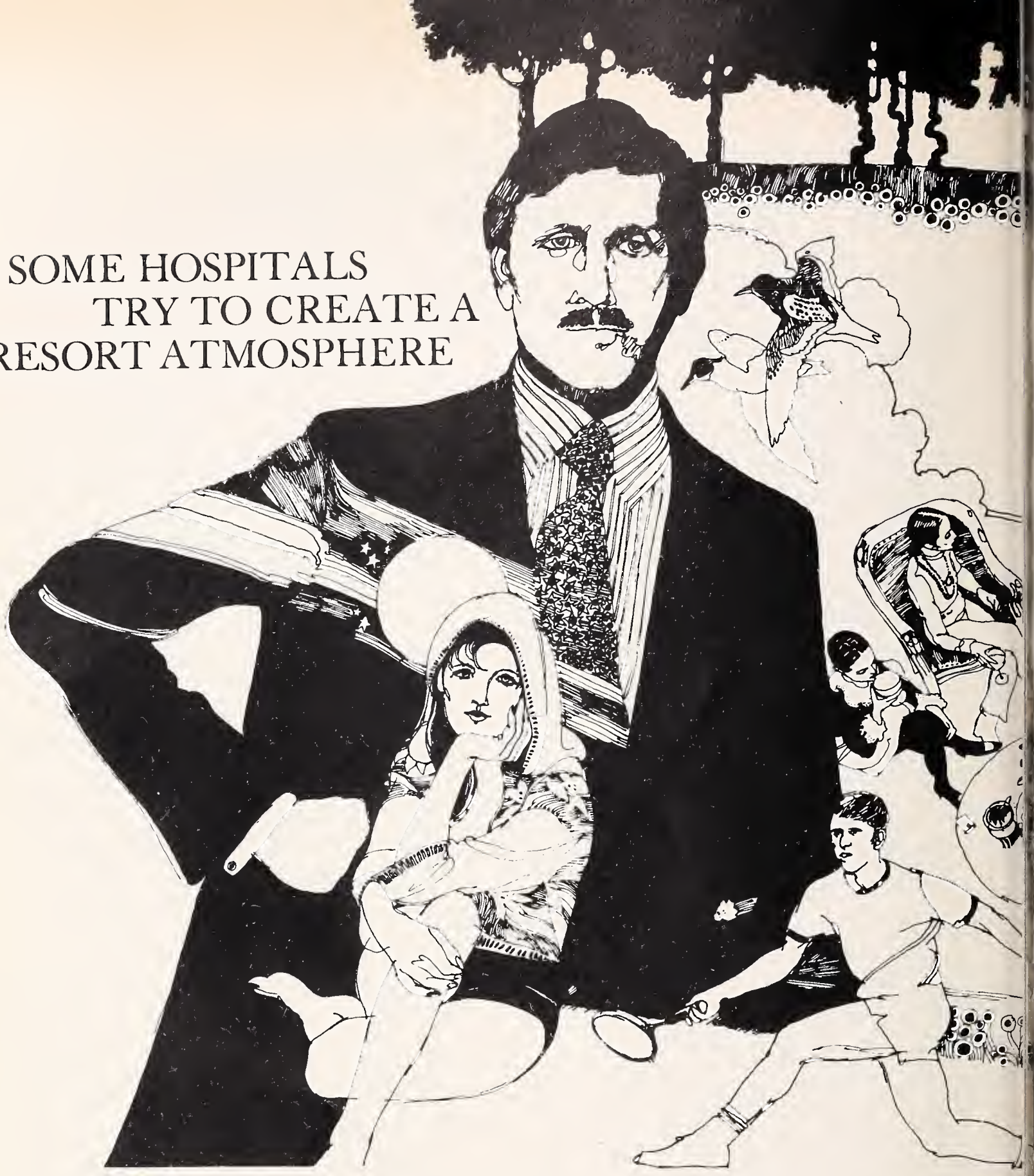
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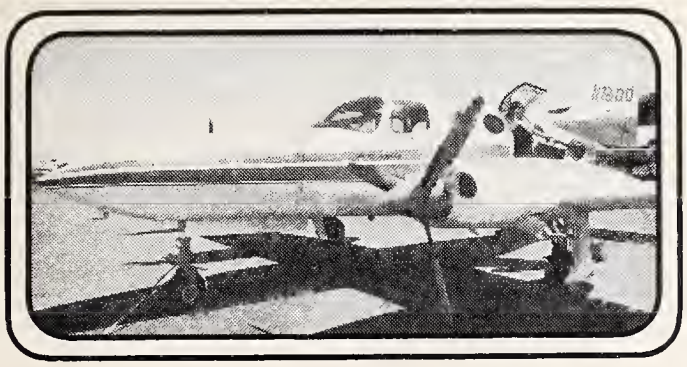
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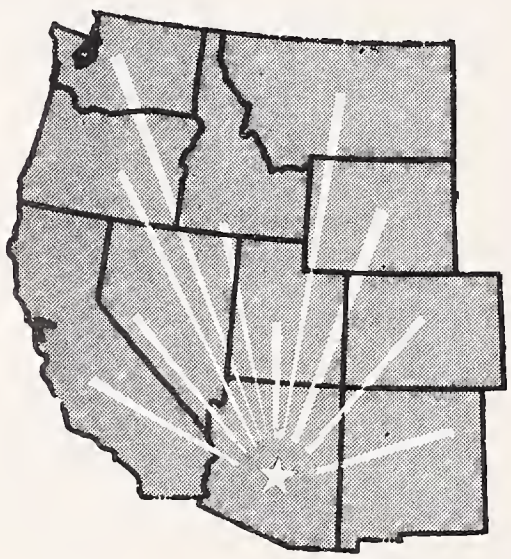


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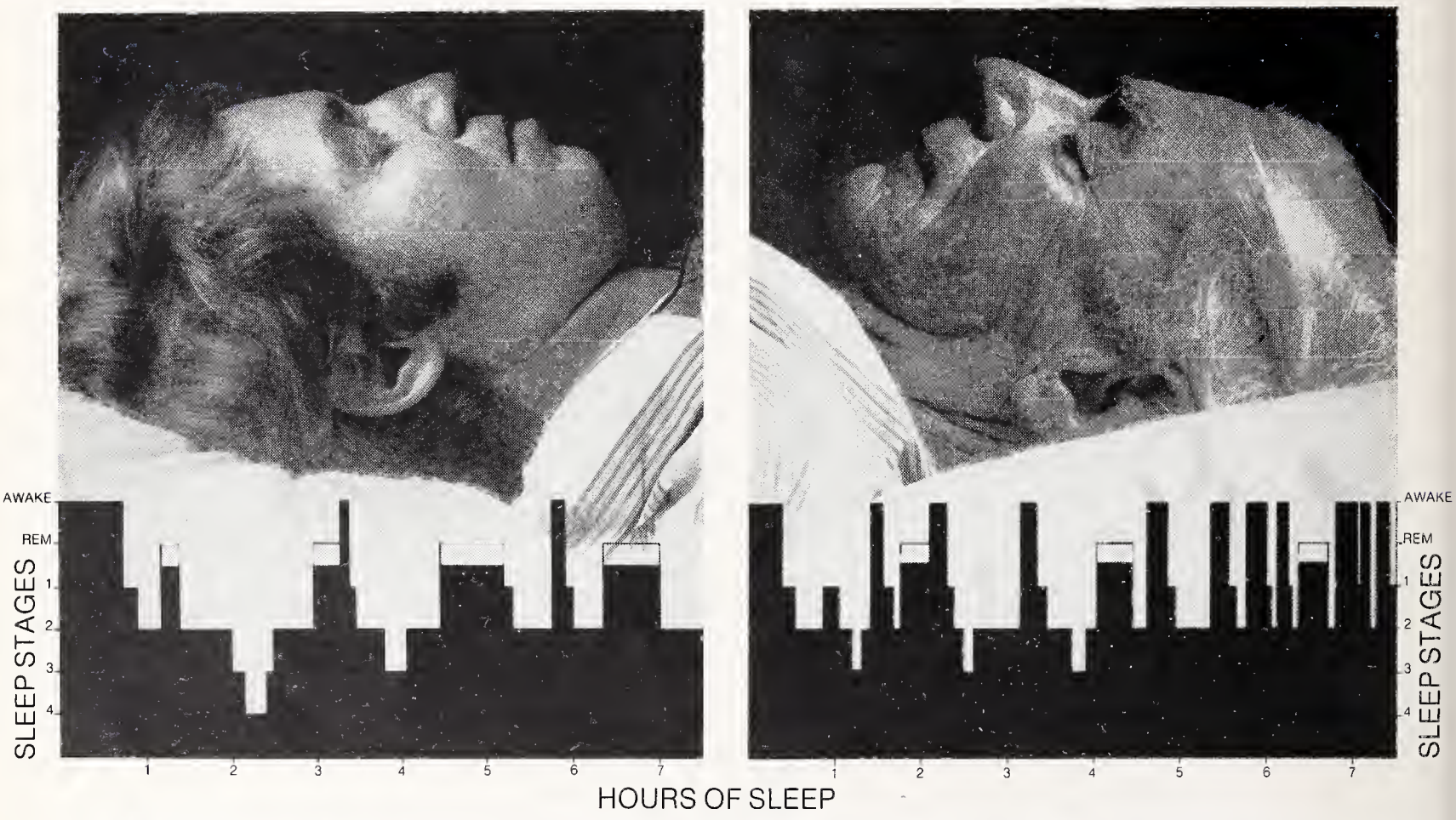
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For adult patients who can't fall asleep...and for the elderly patient who can't stay asleep

Polygraphic measurements of insomniac patients enable scientists at sleep research laboratories to construct profiles of sleep like the ones below.[1]*



Differences in sleep problems demonstrated in the sleep research laboratory

Polygraphic measurements at sleep research laboratories demonstrate 5 sleep stages. Stages 1 through 4 are progressive, from lightest to deepest sleep. The fifth stage is REM sleep, characterized by rapid eye movements and linked with dreaming. Typically, a young adult sleeps more deeply and has more REM time than an elderly person. The youthful person also awakes less frequently during the night.

Insomnia problems, too, differ with age. Under the age of 50, difficulty falling asleep is the most frequent complaint, whereas for patients over 50, difficulty staying asleep characterized by frequent and prolonged nocturnal awakenings or very-early-in-the-morning final awakenings appears to be the primary problem.

*The sleep profiles above are artist's representations of abnormal profiles as might be seen in the sleep research laboratory for the insomnia types indicated.

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Demonstrated effective by the science of sleep research

Measurements in the sleep research laboratory that demonstrate differences in sleep patterns also document the effectiveness of Dalmane (flurazepam HCl). Hundreds of hours of experience[1-10] with young adult problem sleepers demonstrated that:

One capsule of Dalmane at bedtime usually:

- produced sleep within 17 minutes
- decreased nocturnal awakenings and time awake after sleep onset
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While no adverse clinical reactions with Dalmane were reported in these studies, dizziness, drowsiness, lightheadedness and the like have been noted, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

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When restful sleep is indicated

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.
One 30-mg capsule *h.s.*—usual adult dosage.

For a summary of product information, please see next page.

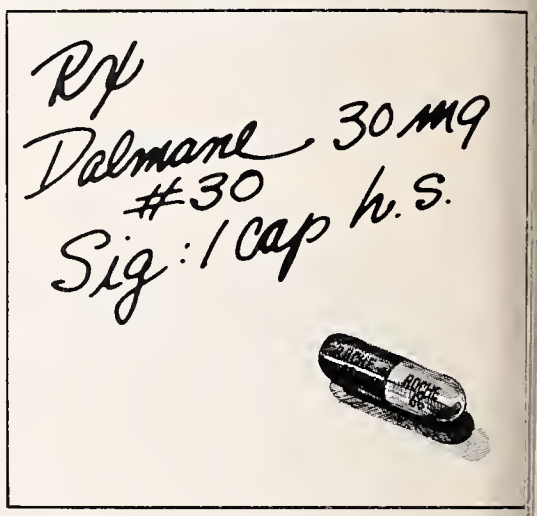
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When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage.
One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.





Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain nervousness, talkativeness, apprehension, irritability, weakness, palpitations chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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COVER

It's Leiningrad, one of the many stops you will make on the ArMA sponsored "Scandinavian Adventure" Pages 106 and 114.

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INDICATIONS: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Possibly" effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension.

Final classification of this indication requires further investigation.

ONTRAINDICATIONS: Tridihexethyl chloride: Previous allergic idiosyncratic reactions to it or related compounds; urinary adder-neck obstructions (e.g., prostatic obstructions due to ypertrophy); pyloric obstructions because of reduced motility nd tonus; organic cardiospasm (megaesophagus); glaucoma; ossibly in stenosing gastric or duodenal ulcers with significant astric retention. **Meprobamate:** Acute intermittent porphyria nd allergic or idiosyncratic reactions to meprobamate or related ompounds such as carisoprodol, mebutamate, tybamate, arbromal.

/ARNINGS: Meprobamate: *Drug Dependence:* Physical and sychological dependence and abuse have occurred. Chronic itoxication, from prolonged use and usually greater than recomended doses, leads to ataxia, slurred speech, vertigo. Carefully supervise dose and amounts prescribed, and avoid prolonged se, especially in alcoholics and addiction-prone persons. Sudden ithdrawal after prolonged and excessive use may precipitate ecurrence of pre-existing symptoms (e.g., anxiety, anorexia, inomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, uscle twitching, confusional states, hallucinosis; rarely convulve seizures, more likely in persons with CNS damage or re-existent or latent convulsive disorders). Therefore, reduce osage gradually (1-2 weeks) or substitute a short-acting barbiturate, then gradually withdraw. *Potentially Hazardous Tasks:* riving a motor vehicle or operating machinery. *Additive Effects:* Possible additive effects between meprobamate, alcohol, nd other CNS depressants or psychotropic drugs. *Pregnancy nd Lactation:* Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or omen of childbearing potential. Animal data at five times the aximum recommended human dose show reduction in litter ze due to resorption.

RECAUTIONS: Tridihexethyl chloride: Use cautiously in elderly ales (possible prostatic hypertrophy). **Meprobamate:** To avoid versedation, use lowest effective dose, particularly in elderly nd/or debilitated patients. Consider possibility of suicide attempts; dispense least amount of drug feasible at any one time. To avoid excess accumulation, use caution in patients with compromised liver or kidney function. Meprobamate may precipitate seizures in epileptics.

ADVERSE REACTIONS: Tridihexethyl chloride: Dry mouth (fairly frequent at oral doses of 100 mg), constipation or "bloated" feeling, tachycardia, bradycardia, dilated pupils, increased ocular tension, weakness, nausea, vomiting, headache, drowsiness, urinary hesitancy or retention, dizziness. **Meprobamate:** *Central Nervous System:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity. *Gastrointestinal:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations, tachycardia, various forms of arrhythmia, transient ECG changes, syncope; also hypotensive crises (including one fatal case). *Allergic or Idiosyncratic:* Usually after 1-4 doses. Milder reactions: itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). *Other:* leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe, rare hypersensitivity: hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case after meprobamate plus prednisolone). Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids). *Hematologic:* Agranulocytosis and aplastic anemia (rarely fatal), but no causal relationship established. Rarely, thrombocytopenic purpura. *Other:* Exacerbation of porphyric symptoms.

USUAL ADULT DOSAGE: One 'Milpath'-400 (meprobamate 400 mg + tridihexethyl chloride 25 mg) tablet three times a day at mealtimes and 2 at bedtime. For greater anticholinergic effect, 2 'Milpath'-200 (meprobamate 200 mg + tridihexethyl chloride 25 mg) three times a day at mealtimes and 2 at bedtime. Meprobamate dose should not exceed 2400 mg daily.

Not for use in children under age 12.

OVERDOSAGE: Tridihexethyl chloride: Acute overdosage can produce dry mouth, difficulty swallowing, marked thirst; blurred vision, photophobia; flushed, hot, dry skin, rash; hyperthermia; palpitations, tachycardia with weak pulse, elevated blood pressure; urinary urgency with difficulty in micturition; abdominal distention; restlessness, confusion, delirium and other signs suggesting acute organic psychosis. Empty stomach after administration of Universal Antidote and treat symptomatically as indicated. **Meprobamate:** Suicidal attempts with meprobamate, alone or with alcohol or other CNS depressants or psychotropic drugs, have produced drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse, and death. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Meprobamate is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

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This man governs an empire—the section of beach that he combs—and he may have much in common wi a business tycoon. Both may be ulcer-prone for simila reasons: both may be difficult to please—both may b demanding, especially of themselves. While there are many types of duodenal ulcer patients, it has been note that, characteristically, these individuals are not easily satisfied.

Measuring oneself against one's own expectations or against those of society may be equally trying—equall anxiety-provoking. It is hard to win when both succes and failure can demand a similar price.

If the ulcer patient were to modify his expectations, h would experience less anxiety—and perhaps fewer ulc attacks. In most cases, this would mean altering the en- tire constellation of psychological attitudes. Many are unwilling to do so, and many are unable. But while the patient is trying to make his best adjustment to his ulce he often needs therapeutic relief for both the undue anxiety with which he may be plagued and the hyper- secretion and hypermotility that cause pain and spasm.

*Palmer, E. D.: *Clinical Gastroenterology*, ed. 2, New York, Hoeb Medical Division, Harper & Row, 1963, p. 206.

Captain of Industry



brax can relieve excessive ıxiety, thereby helping to reduce ain and spasm

ıce duodenal ulcer is frequently associated with :essive anxiety and tension, therapy logically demands ief from both the psychic and the somatic discomfort. rax can help provide this dual relief. Only Librax pro- es in a single capsule both the antianxiety action of rium® (chlordiazepoxide HCl) and the antisecretory/ ispasmodic action of Quarzan® (clidinium Br). With rax, the patient usually tends to react less strongly ıxiety-provoking situations, and hypersecretion and ermotility are also reduced. A reduction of asso- ed pain and spasm can also be expected, and often er attacks become fewer and farther between!

o to 8 capsules daily divided doses

timum therapeutic response can be achieved with ividualization of dosage—within the range of 1 or 2 sules, 3 or 4 times daily. Many patients will respond l to 1 capsule *t.i.d.* and 2 at bedtime. Librax can en be relied on both to help in managing the acute ıck and to help the patient maintain gains in therapy.

rax: Initial therapy, Rx #35, Sig: cap.℈ *t.i.d. a.c.* ℈ *h.s.*

ow-up therapy, Rx #100, Sig: cap.℈ *t.i.d. a.c.* ℈ *h.s.*

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.
Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.
Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.
Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.
How Supplied: Librax® Capsules, each containing 5 mg chlordiazepoxide hydrochloride (Librium®) and 2.5 mg clidinium bromide (Quarzan®)—bottles of 100 and 500.

for the anxiety-linked symptoms of duodenal ulcer adjunctive

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

CHE

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Each Spansule®(brand of sustained release capsule) contains 8 mg. of Teldrin®(brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; and 2.5 mg. of isopropamide, as the iodide.

Knows the public's enemies—nasal congestion, runny nose, sneezing, watery eyes.

Knows what to do about them too.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

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Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F *Smith Kline & French Laboratories*



"For generations my family has insisted on Donnagel®-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric—without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific rheas: all the benefits of paregoric, without the unpleasant taste. Donnagel®-PG treats mpanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of leasant-tasting paregoric, it contains the therapeutic equivalent, powdered opium, romote the production of formed stools and lessen the urge. And it provides the ulcent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of adonna alkaloids. And a good banana flavor to baby any taste.



Donnagel®-PG

Donnagel with paregoric equivalent

℞ Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

Each 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; pine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg. ivalent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative), mg.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A·H·ROBINS

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WINTER
COUGHS



CLEAR THE TRACT WITH THE ROBITUSSIN® LINE

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

ROBITUSSIN®

Each 5 cc. contains:
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Alcohol, 3.5%

For unproductive allergic coughs

ROBITUSSIN A-C®

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Pheniramine maleate 7.5 mg.
Codeine phosphate 10.0 mg.
(warning: may be habit forming)
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Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM®

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Dextromethorphan hydrobromide 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS®

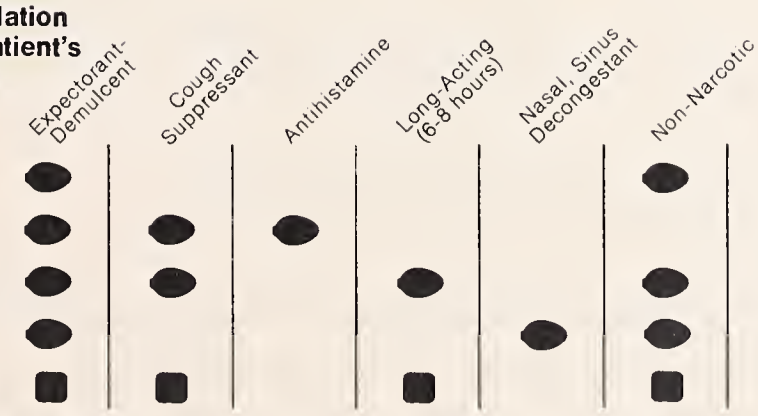
Each Cough Calmer contains:
Glyceryl guaiacolate 50 mg.
Dextromethorphan hydrobromide 7.5 mg.

Relieves cough, clears sinuses and nasal passages—keeps them "drip-dry" but not bone dry

ROBITUSSIN-PE®

Each 5 cc. contains:
Glyceryl guaiacolate 100 mg.
Phenylephrine hydrochloride 10 mg.
Alcohol, 1.4%

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r-Tract" Formulation
Treats Your Patient's
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s:



s handy chart as a guide in selecting the formula that provides the benefits you want for your patient.

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2. Be guided by the general rules of medcal writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

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5. The Journal reserves the right to edit all material.

6. Reprints will be supplied to the author at printing cost.

Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71

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When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin® 300 mg. Capsules

[methacycline HCl]

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udies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

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Because the taste is good.

- □ promptly relieves hyperacidity
- □ also relieves fullness and bloating
- □ non-constipating



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aluminum and magnesium hydroxides with simethicone

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"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%
Believe combination drug products are useful.

13.8%
Do not believe combination drug products are useful.

Are combination drug produc
useful in treatment involvir
concomitant use of two or more drug

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility – and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good example of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

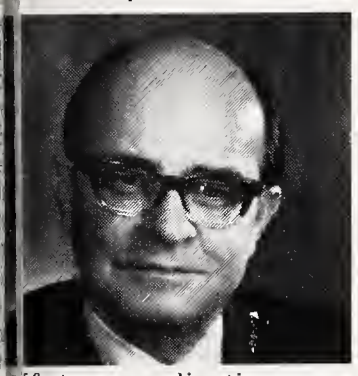
The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investigators and cost a grea of money. I wish we agree on a "grand clause" approach to rations that have beer for a number of yea that have an appa satisfactory track rec

For example, I some of the antibioti binations that were off the market by th performed quite wel thinking particula penicillin - strepto combinations that p – especially surgic tients – were given injection. This ma less discomfort for t tient, less dema nurses' time, and opportunities for errors. To take preparation off the doesn't seem to b medicine, unless act age showed a great harm from the inj (rather than the use) of the combina

The point that sh emphasized is tha are both rational a tional combinatio real question is, wh determine which is Obviously, the FD play a major role i ing this determinat fact, I don't think avoid taking the u responsibility, but it enlist the help of physicians and ex assessing the evide in making the ultim cision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are
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fact that single-ingre-
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the term "fixed dose"
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combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by $443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irrefutable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

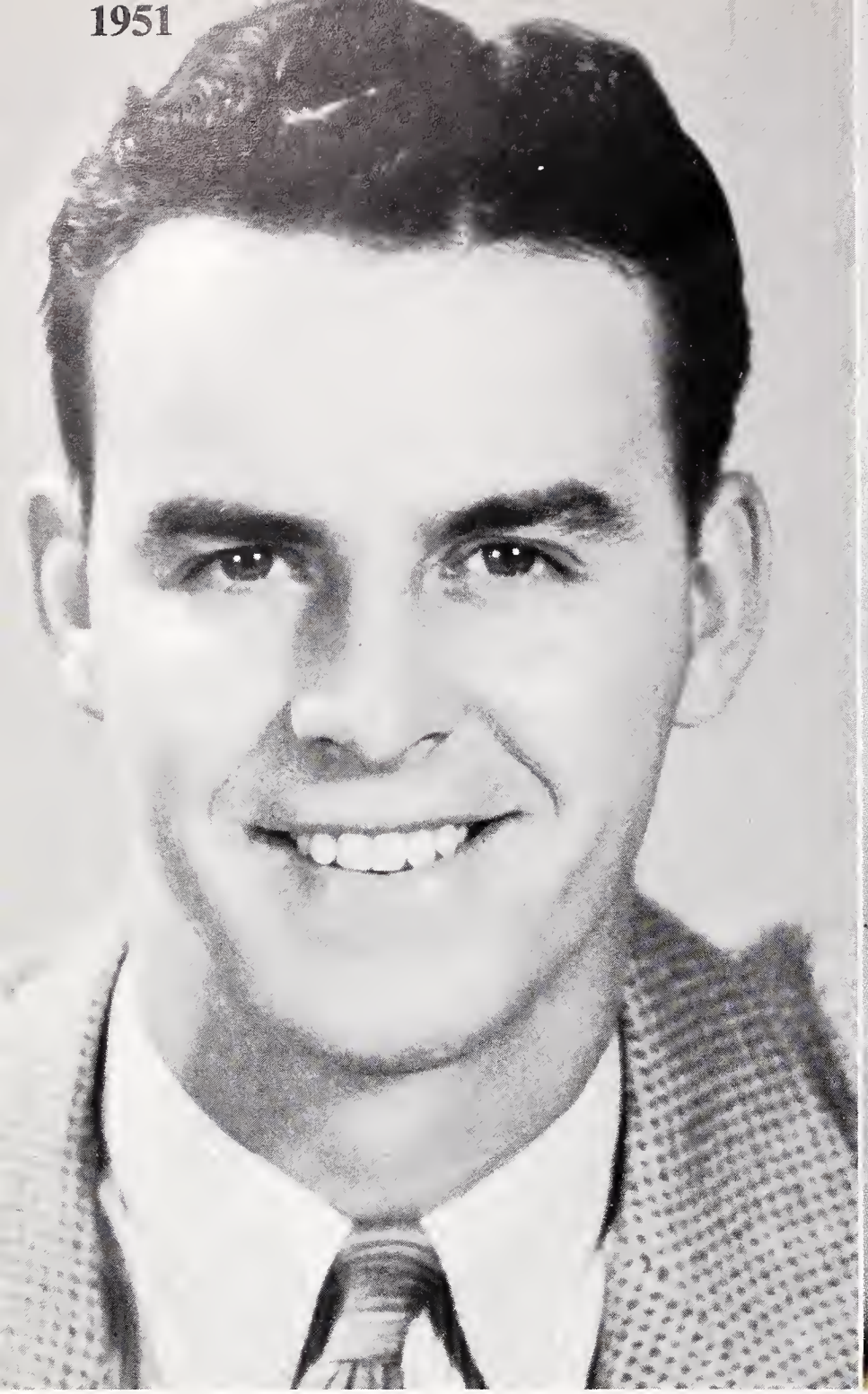
In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

P·M·A

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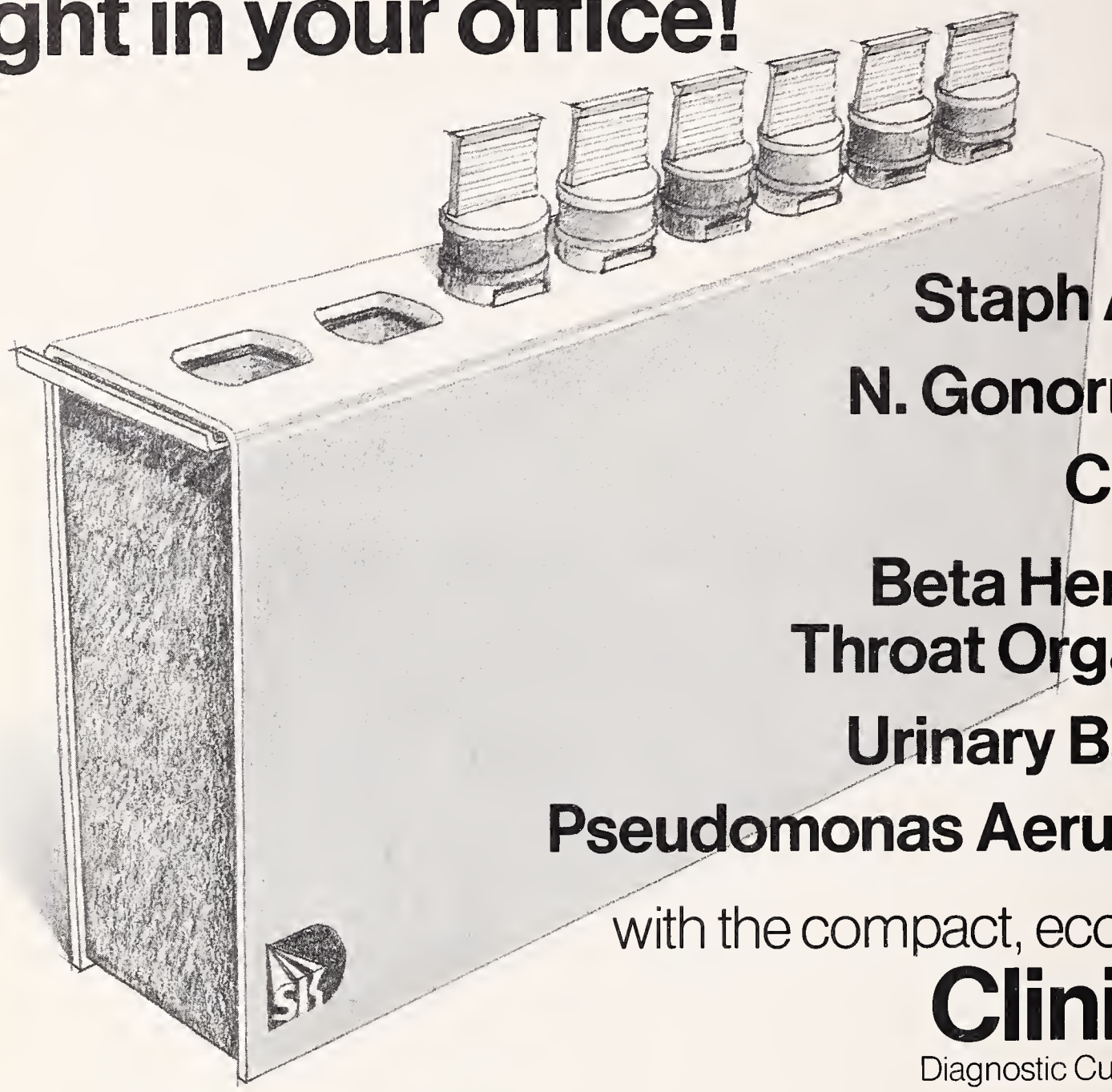
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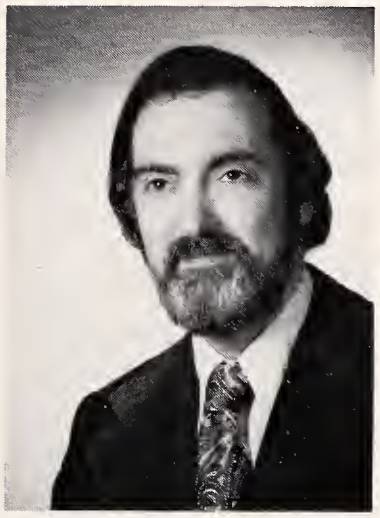
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Original Articles

GERIATRIC PSYCHIATRY—A GLOBAL VIEW



HAROLD D. UDELMAN, M.D.

Dr. Udelman's article should be thought provoking to all physicians, regardless of specialty or subspecialty, who care for geriatric patients. It focuses on an area of practice which is relatively neglected, and frequently left to non-medical social planners to manage or mismanage. The subspecialty of Geriatric Psychiatry cannot meet the needs of our burgeoning geriatric population. The threat posed to the physician by aging and death must not deter his contribution to the solution of the problems of his aging patients.

Geriatric Psychiatry is a relatively new subspecialty in which knowledge from medicine and its sub-specialties has been integrated with psychiatric concepts in a comprehensive approach to problems of aging. The problems of geriatrics are increasing at a great pace and seem very directly related to the increase in early retirement and leisure time. Our knowledge about various generations, ie: beat, etc., seems to bypass what could be called "the forgotten generation." Their increasing impact on medicine and society, in general, is underscored by the projection of twenty-five million people over the age of sixty-five by 1985. The concerns over identity are found at various stages of life; understanding and utilization of the positive factors involved are of primary importance in aging with its crisis of identity.

The literature of geriatrics revealed an interesting observation about interns and residents of an oriental culture. In a hospital, in which this was reviewed, these interns and residents were unwilling or unable to deal with nursing home placements. It is notable that few such homes are found in their culture. When they are found, residents are limited primarily to rich families. From this, one might question whether nursing home placements and residential treatment of geriatric problems are primarily related to affluence. With emphasis on youth, does affluent society alienate and isolate the aged. I feel that this is not a total answer; that it is too simple an explanation. There is a true need for residential facilities engendered by the varied parameters of illness in aging persons. There is a need for a total view, including the biological, sociologic and personal or psychological factors in aging. If families are truly unable to manage medical care, emotional stress and/or financial strain, then facilities for placement become invaluable.

Although all psychiatric illnesses of the aged

From 333 W. Thomas Road, Phoenix, AZ 85013.

are not chronic brain syndrome secondary to cerebral arteriosclerosis, it is relatively simple for physicians to examine an aged patient and say that his behavioral difficulty is due to organic changes within the brain. However, symptoms can often be traced back to prior personity disorders with neurotic traits. Disruption of function can result with the losses endured by the aged. These losses include their decrease in social role, economic loss, medical illness, decrease in strength and/or attractiveness as well as multiple object losses. The latter includes the death of friends, family, etc. There is, at times, an overvaluing of the past which is associated with adaptational conflicts in the present and future.

Aging, thus, represents a distinct period of life in which perspective requires accepting loss, reidentifying the self in society and, to a degree, withdrawal or disengagement necessitated by the demands of the modern world: competition and value on achievement. There is, however, a great need to improve communication and respect for both aged and youth. The former contributes greatly in experience, wisdom and difference in perspective. The ability to communicate these assets transcends the memory and concentration difficulties which might be found in the mild organic impairment of the aged patient. These factors are most important to recognize by those treating geriatric patients, so that communication does not automatically become an impossible factor at the beginning of treatment, thus dooming treatment to failure.

Personal characteristics of geriatric patients include the following: A) increased dependency with associated decrease in self-esteem; B) conflict in accepting aging which requires recognition of later years as a consummation of one's labors, patience, wisdom and experience; C) a fear of death; D) a reevaluation of goals which have changed in terms of their impact upon society, their family and friends and their relative relationship with the future in terms of long versus short range. Those who work with geriatric patients must acknowledge and accept their own eventual fate, to deal effectively with people in this group who see death as an imminent event for themselves. Sincerity is extremely important. This outlook is helpful in developing good values and self esteem, which must be maintained to allow the geriatric patient to function on an adequate level.

The problem of prevention of emotional illness in the aged must be approached on muliple bases. Of primary importance is the need to maintain as healthy a physical status as possible. It is necessary, also, to recognize the adage "the first to come are the last to go." Thus, in earlier stages of life as much as can be learned, provides an individual with a foundation for maintaining a good grasp of reality, adequate participation in environmental circumstances and the ability to relate in varied situations. In this respect, education provides optimal growth and development. Economic security is another significant factor. Also of importance, in the achievement of emotional stability, is the maintenance of as stable an environment as possible. The original home is preferable for the patient, in terms of avoiding disruption in his normal life routines. A second possibility would be the home of a relative, However, as well known, this may compound difficulties and awaken earlier conflicts and problems which may become insoluble and contribute to further emotional deterioration. We are all familiar with the aged patient who, because of organic factors as well as the emotional stress about him, reacts in a severely disturbed manner to the slightest change of furniture in his environment. The need becomes apparent, therefore, for the stability that may be provided solely by an institutional setting in these severely disturbed cases. However, the need for institutional placement may be necessary even without severe disturbance, because of environmental factors at home, and/or the physical and emotional needs of the individual which are not met in the primary circumstance.

When preventive measures fail, illness occurs with factors of both organic and functional etiology. Often, somatic symptoms are the presenting features of depression or withdrawal. Frequently, overwhelming stress, which may be perfectly tolerable to a younger person, becomes a disabling factor in the aged. Not only does disengagement from his environment ensue, but it tends to progress to withdrawal and isolation. When the individual becomes unmanageable at home, some type of placement becomes necessary. This may involve a hospital or a nursing home. Studies suggest that individual and group therapy as well as milieu and occupational therapy have all been helpful on an inpatient basis. Drug therapy is another valuable adjunct in the

management of many of these problems. Group therapy was reported to have begun around 1950, by Silver, in England. His reports suggest that approximately 90% of patients' symptoms improved. Individual therapy was also felt to be of aid, but not in as great a proportion as group therapy. Milieu therapy emphasizes recreational activities and industrial assignments. Educational therapy, music therapy and occupational therapy have also been of great aid.

Upon admission to a hospital or a nursing home, geriatric patients must face problems of multiple disabilities, i.e. slower rate of learning, long periods of inactivity and a possible state of bedfastness endured prior to admission. Isolation, insecurity in the environment, poor self-image, decreased standards of mental function, cleanliness and problems of socializing all affect adaptation.

It is interesting to note in several studies, that mixed groups are felt to be best in producing improvement in involvement and interest. Also, attention spans, which are quite short upon admission, tend to be improved by these group involvements lasting approximately forty-five minutes. The goals of institutional care are to improve self-esteem and confidence, and to develop friendships and express aggressive drives in a socially acceptable and controlled fashion.

The leisure aspect of aging tends to dramatize problems which are being faced, increasingly, by the general population. Automation diminishes the amount of time necessary to spend in work and provides people with the challenge of more free time. Education in and preparation for retirement might well be a preventitive in this specific problem faced by the aging. Development of hobbies and other interests is important in providing adequate outlets for an individual. Even the geriatric patient who has sufficient hobbies and skills, however, may develop an emotional illness. So in psychotherapy, be it individual or group, one must assist the patient in reaching a sense of "intactness and completeness" allowing integration of his role and his present environment.

Drug therapy may involve a cross section of our current armamentarium. These may vary from medications for increasing cerebral circulation to antidepressants, tranquilizers and drugs for underlying medical conditions. One must be more careful with the aged, in pharmacotherapy, because the therapeutic amount and the amount necessary for decompensation may be very small. A therapeutic amount of an anti-depressant may produce hyperactivity, confusion and restlessness. Similarly, the tranquilizer prescribed in modest amounts for young people may produce depression or withdrawal in the elderly.

SUMMARY

Geriatric Psychiatry, at this time, is in an adolescent stage because of a need for the evolution of more global concepts in dealing with this "golden" time of life. The identities assumed by the patient in the geriatric age group has much relevance to his emotional well-being and his sense of esteem which he has had throughout his life. His earlier education and preparation for accomplishment as well as his ability to reflect on activities are also related. The problems of aging and leisure time are noted and the similarities between the two are discussed. Dealing with the sense of loss, acceptance of identity in the geriatric time of life and the fear of dying are all pertinent to any therapeutic approach at this time of life.

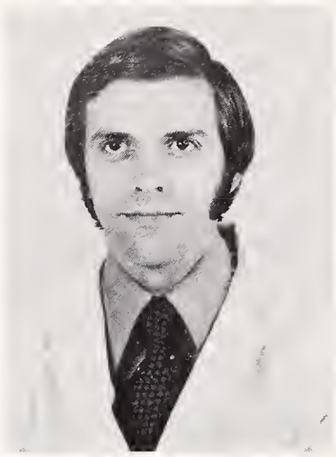
People who deal with geriatric patients must, of necessity, be mature enough to deal with these particular factors in themselves. For the physician to accept his own mortality, to acknowledge his own limitations and to recognize the challenge of changes throughout his life, is invaluable in providing a mature and therapeutic attitude to deal with geriatric patients. Group therapy seems of more value than individual therapy; although, both are helpful in varied circumstances. Certainly ancillary and milieu therapies, involved in an institutional setting, are of major importance in reintegration of the personality of the aged. Drug therapy is likewise of importance. Finally, one must be able to aid the aged patient in seeking his task of completing life in a manner acceptable to himself, primarily, and to his family, secondarily. One must allow the luxury of solitude, but avoid the pathology of isolation.

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PEDIATRIC CONTINUING EDUCATION

MUSCULAR DYSTROPHY – CURRENT CONCEPTS



RICHARD G. CURLESS, M.D.

In 1886 Duchenne first published his report of pseudohypertropic muscular paralysis as a progressive weakness initially involving the proximal musculature of the extremities which occurred only in boys (sex linked recessive).[1] Since that time, several clinical entities of familial weakness with "myopathic" histological changes have been described. In children these include Becker's "benign or slow" sex linked dystrophy, an autosomal recessive form and congenital muscular dystrophy. In adults the most common clinical subdivisions are fascioscapulohumeral (dominant inheritance), limb-girdle (usually recessive) and myotonic dystrophy (dominant). Each has a relatively distinct clinical pattern, but the histological picture is of little help in differentiating one from another. Electromyography is also similar in the various dystrophies except in myotonic dystrophy in which one finds the prolonged bursts of high frequency action potentials resulting in the "dive bomber" effect. However, this disorder does not reveal the histological changes of myopathy.

By use of the history, examination, clinical course, muscle biopsy, electromyography (EMG), and nerve conduction velocities an attempt is made to differentiate myopathy from neurogenic atrophy. Most dystrophies (myotonic dystrophy being an exception) initially reveal proximal limb weakness and atrophy. The typical picture of neurogenic atrophy is distal involvement at the onset of the disease. Early in a myopathy the absence of fasiculations as well as "dystrophic changes" in the muscle biopsy point strongly toward a primary muscle disorder. Finally, in dystrophy the EMG often reveals low amplitude, short duration action potentials. In neurogenic weakness one expects to find "giant" high amplitude, long duration potentials as well as spontaneous fibrillations.

Of the remaining two diagnostic tools — serum enzymes and electron miscroscopy — only the former is of major benefit.[2] Creatine phosphokinase (CPK, creatine kinase), the enzyme that catalyzes the reversible reaction: crentine + ATP $\rightleftharpoons$ creatine phosphate + ADP, was found elevated in the serum of dystrophic patients by Ebashi.[3] Subsequent studies pointed out its high concentration in the sarcoplasm of skeletal muscles, in the myocardium and in the brain. It is absent from liver, lung and red blood cells and is notably stable in the normal, resting state. There is generally very little CPK elevation in neurogenic atrophies. This makes it a useful test to differentiate the rapidly progressive dystrophies (such as Duchenne's) from neurogenic weakness.[4] However, the more slowly progressive, adult onset disorders (fascioscapulohumeral and limb-girdle dystrophy) usually have very little CPK elevation. In general, the CPK change preceeds the onset of weakness in Duchenne's Dystrophy and tends to drop gradually as extensive muscle destruction is replaced by connective tissue. The inflammatory myopathies (dermatomyositis and polymyositis) usually have moderate elevations in CPK which depend upon the amount of tissue involved.[5]

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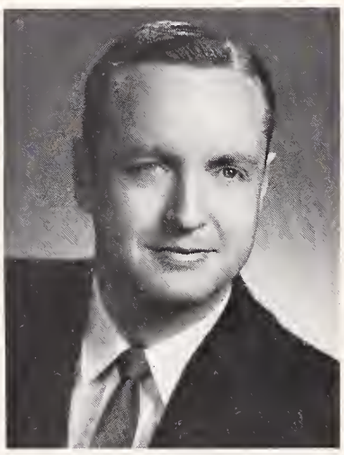
Creatine phosphokinase levels have been used to study three groups of patients: "subclinical," preclinical and carriers of Duchene Muscular Dystrophy. Geneticists suggest that because too few male siblings have developed the disease to satisfy the laws of probability for a sex-linked disorder, a "subclinical" condition may exist. Enzyme levels on a series of older normal male siblings failed to reveal any significant abnormality so that the existance of such a group is only a theoretical possibility.[6] Preclinical patients are the young male siblings that subsequently develop dystrophy. Studies of small numbers of these children point out both elevated CPKs and abnormal histology.[7] The possibility of false negative results has not been adequately explored, however.[8] Carrier detection has been studied using CPK determinations, EMG and histology. Seventy to 80% of definite carriers (two or more generations of myopathy) have elevated CPKs. Quantitative electromyography may raise this figure to greater than 90%.[9] However, the latter type of study is not available in most EMG laboratories. The histology in suspected carriers varies greatly in terms of the degree and frequency of abnormality.

The pathogenesis of any of the dystrophies remains unknown. Perhaps the most attractive hypothesis involves the possibility that there is a neurogenic dysfunction responsible for the so-called "primary" myopathies. Although there is no information as to neuroanatomical location of such an abnormality, some EMG and histological data support this possibility. Neurogenic abnormalities are often found electromyographically in patients with early dystrophy.[10] In addition, Dubowitz found "myopathic" as well as "neurogenic" histological abnormalities following denervation of muscle in experimental animals.[11] The significance of these implications is unclear but it is hoped that further careful study will uncover the basic mechanism of the dystrophies so that medical science can get on with the task of finding a rational therapeutic or preventive approach.

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DILUTION-SOLUTION TO POLLUTION? PERITONEAL LAVAGE



SHERMAN W. THORPE, M.D., F.A.C.S.

Diffuse peritonitis remains a challenging and oft times perplexing problem today, in spite of advances in antibiotic therapy. Management by peritoneal lavage has been controversial in the past. This paper presents this method of treatment in a favorable light with a review of several cases.

PROBLEM

Diffuse peritonitis remains a challenging problem in clinical medicine today. Its dramatic life-threatening picture demands aggressive and early therapy to insure survival. Naturally, the issue of survival depends upon the basic pathophysiological problem at its root cause and its timely surgical correction. However, the management of the general peritoneal cavity remains controversial.

HISTORICAL

In 1905 Price described operative peritoneal lavage as a method for treating diffuse peritonitis. In 1911 Frank Torek described a method of peritoneal lavage for general peritonitis in which he washed the peritoneal cavity with gallons of sterile saline and then closed the abdomen without drainage. He claimed a reduction in mortality from a previous 100% to 33%. However, John Deaver in 1910 reported that lavage was of no benefit, an opinion maintained by some today.

In 1942 at Temple University Hospital in Philadelphia, Dr. W. Emory Burnett operated on a brother of one of the staff physicians who was suffering from an advanced diffuse septic peritonitis secondary to gangrenous appendicitis. The patient exhibited greenish-black foul smelling exudate diffusely involving the peritoneal cavity. This clinical picture usually foretold death within twenty-four to forty-eight hours. Sulfanilimide was the only antibacterial agent available at that time and it was also known that when great amounts of pus were present, paramino benzoic acid contained in the pus would neutralize the effect of sulfanilimide. In desperation Dr. Burnett lavaged the peritoneal cavity with several liters of sterile physiologic saline solution until clear return was obtained in the aspirate and he then instilled an 0.8% solution of sulfanilimide in 800 cc. of sterile saline into the peritoneal cavity, placed a metal sump drain in the pelvis and closed. The patient's recovery was remarkably dramatic and rapid with his post-operative temperature never rising over 100 degrees. He suffered no complications and was discharged within ten days.

Since that time peritoneal lavage was used at Temple with increasing frequency and, along with the advent of antibiotics, mortality from diffuse peritonitis became an extremely rare event. Because of continued improvement noted at Temple in patients receiving peritoneal lavage therapy this success prompted Burnett, Brown, et. al., to publish a paper citing the benefits of peritoneal lavage in 1957. G. Raymond Brown conducted animal experiments on 140 guinea pigs in which a standard celiotomy with colotomy was devised to initiate fecal peritonitis. These animals were divided into groups of twenty as follows:

	Total	Dead	Alive
Initial (peritonitis only)	20	17	3
Closure only	20	7	13
Closure & instillation of P & S	20	7	13
Closure & P & S I.M	20	5	15
Closure & lavage with NaCl	20	5	15
Closure & lavage with NaCl & P & S	20	6	14*
Closure & lavage with NaCl & P & S and P & S I.M.	20	0	20

*two died of pneumonia
P — Penicillin S — Streptomycin

Burnett and Brown summarized the logic upon which this combined procedure was developed: (a) the basic surgical principal of removal or neutralization of the cause is applied

From 451 N. Vineyard St., Mesa, AZ 85201.

and (b) lavage removed large quantities of toxins from a great absorptive area and many bacteria which would otherwise have to be dealt with by the body's defenses. Enzymes, either those destructive of antibiotics or digestant types as in pancreatitis, are removed from further interfering with the reparative process. Chemical irritants and digestive enzymes leaking from ruptured peptic ulcers are removed. Foreign material, such as feces, urine and blood, with their varying degrees of irritation and infection, are removed. All surfaces are exposed to antibiotic solutions which can be delivered in concentrations unattainable by systemic administration. Such concentrations can overwhelm even non-sensitive bacteria.

Since the publication of this paper many reports both from an experimental basis and those of similar clinical application have appeared in the literature and almost without exception have cited evidence supporting this concept. Recently, in its evolutionary development, continuous postoperative peritoneal lavage has been used with dramatic benefit.

EXPERIMENTAL

The average surface area of the adult peritoneal cavity is over 22,000 square centimeters. When this surface area is diffusely inflamed it can have a shocking effect in fluid displacement alone comparable to a 75% or 100% body surface burn. Peritoneal fluid occurring late in the course of strangulating intestinal obstruction is extremely lethal. Hardy found in experiments with dogs that as little as 3 cc. per kilo of this fluid injected into the peritoneal cavity of a normal dog always proved fatal. He also found that each animal with experimental strangulated small bowel obstruction produced enough toxic peritoneal fluid to kill seven other dogs of similar weight. In this same group of experiments he found that simple aspiration of this fluid was not enough to save the animal, but simple saline lavage with copious amounts of sterile saline did dramatically prolong survival time and actually allowed four animals to recover completely. Chemical analysis of this fluid in strangulation obstruction revealed hyaluronidase, lecithinase and fibrinolysins.

Farrington, Saravis, Cossette, and Clowes of the Department of Surgery at Harvard Medical School demonstrated a blood-born factor responsible for pulmonary lesions caused by severe

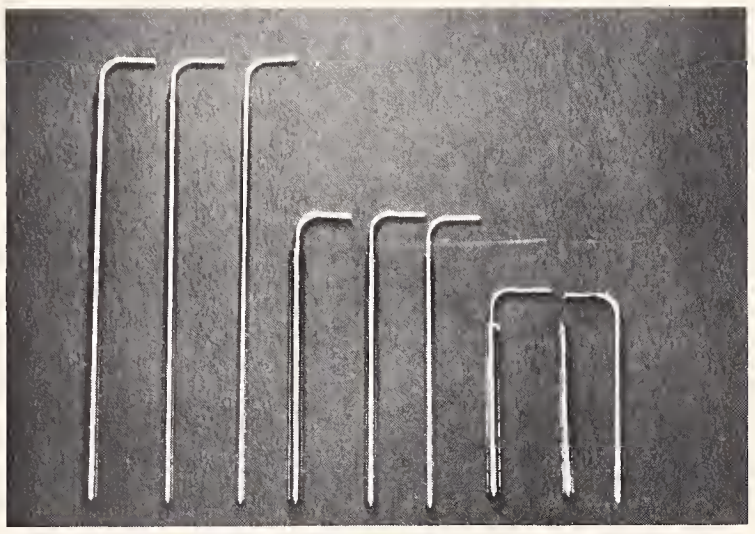


Figure 1
Metal (steel) Sump Drains.

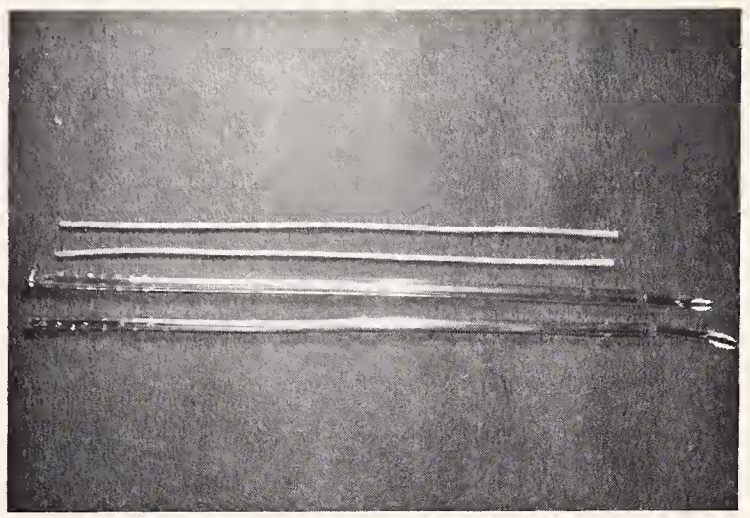


Figure 2
Plastic Sump and delivery catheters.

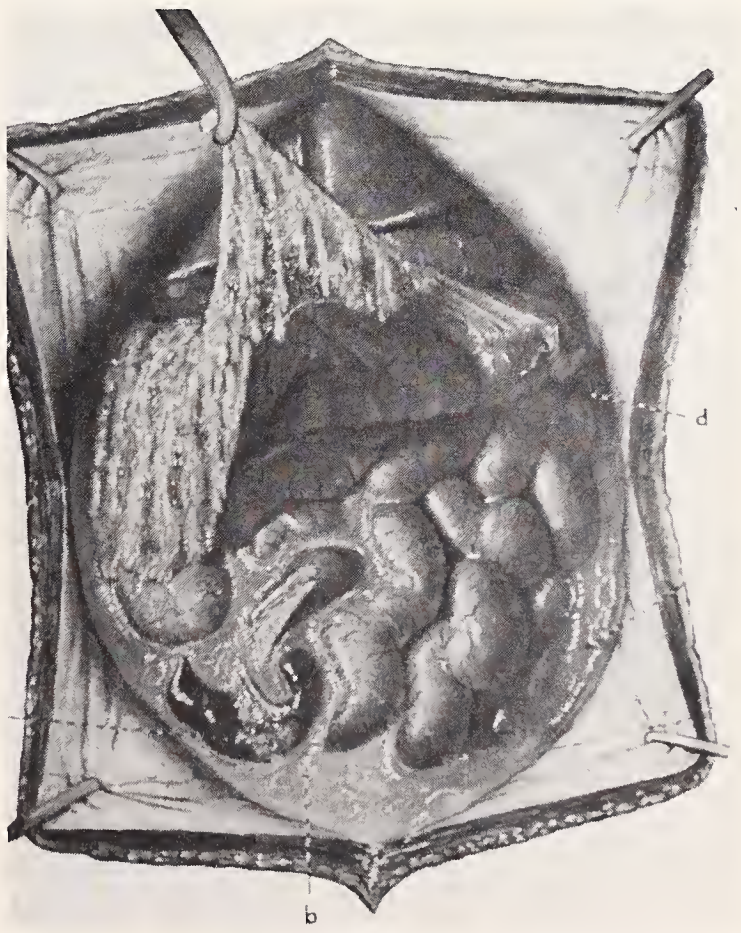


Figure 3
Septic Peritonitis a foul smelling toxic lethal mess.

sepsis in other parts of the body. Clinical and experimental observations suggest that the classical bronchopneumonia and atalectasis described by Moon are preceded by a pulmonary lesion which consists of three distinct abnormal entities: (1) Interstitial edema accompanied by leukocytic infiltration and the adherence of leukocytes to the endothelium of vessels, (2) vascular congestion with red cells and microthrombi, and (3) focal alveolar collapse. These changes not only lead to hypoxemia caused by an alteration in the ventilation perfusion ratio, but also to pulmonary hypertension and a degree of right heart failure. Utilizing a canine peritonitis model with an isolated pulmonary lobe for perfusion, they concluded that in the presence of sepsis a factor is transmitted in the plasma which alters the pulmonary capillary membrane and increases its permeability. It also appears that since plasma from a septic animal was incapable of altering the red cells of a normal animal, the change of erythrocyte surface protein, associated with aggregation, must occur during its passage through the vasculature of the septic or injured area.

Wall found that most toxic substances in peritonitis are water-soluble and are readily removable by lavage. McKenna and associates instilled 100 cc. of Conray (radio-opaque material) into the peritoneal cavity and demonstrated its ready diffusion throughout the peritoneal cavity. Kelly and Vest have shown that the severe electrolyte and fluid imbalance found in peritonitis is readily corrected by peritoneal lavage with a balanced salt solution. Artz and coworkers demonstrated that the use of topical antibiotics along with systemic therapy is more effective in experimental peritonitis than either one alone. It is worth emphasizing repeatedly that peritoneal lavage in sustained or one shot form is a mechanical fluid debridement, which if not accomplished by the surgeon, would leave a large amount of necrotic debris, bacteria, enzymes, pollutants, etc., removal of which would demand massive expenditure of energy by the host. This energy would be derived from the host at a great expense of protein and fat catabolism.

Experience allays the fears that peritonitis can be introduced by such a procedure as lavage. Merrill and associates in peritoneal dialyzing work found infection extremely rare and also felt that bacterial or chemical peritonitis was no contraindication to peritoneal dialysis. In experimental peritonitis with dogs, bacterial counts in the aspirate returned to near zero within twenty-four to seventy-two hours. This has been observed on random culture samples taken on my own patients from the peritoneal aspirate two and three days postoperative — they have usually been sterile.

In the past few years reports of continued post-operative lavage have appeared in the literature and all have emphasized improvement by this method. For example, S. Aune and E. Norman of the Ulleval Hospital in Oslo, Norway, treated thirty-eight patients with diffuse grossly purulent peritonitis with post-operative interval peritoneal lavage using a balanced salt solution containing a high concentration of antibiotics. They instilled a liter of this fluid every two hours, allowing it to remain for forty-five minutes before aspiration, and repeated this around the clock for some two to five days depending upon the response of the patient and the severity of the peritonitis. Twenty-seven of these patients had no complications. There were two deaths in this group from continued fecal soilage of the peritoneal cavity. Those exhibiting complications were five with wound abscess, two with thrombophlebitis, and two with pneumonia. Of those cases of peritonitis secondary to appendicitis, they reduced their rate of complications from a usual 90% in those treated conventionally to 31% by means of lavage. McKenna, et. al, at the University of Toronto Hospital in Canada reported the results of twenty-five patients with diffuse peritonitis treated conventionally and a second group of 25 patients treated the same but with adjunctive continued postoperative peritoneal lavage. The conventional group suffered 15 deaths, six intra-abdominal abscesses, six wound abscesses, and three wound disruptions. The lavage group suffered five deaths, one intra-abdominal abscess, and two wound abscesses. No wound disruptions occurred in the lavage group. The average age in the former group was 71 years and the average age of the lavage group was 73 years. These findings score an overall reduction in mortality of 40% and a reduced morbidity of 50%. McKenna strongly recommends lavage whether for diffuse peritonitis caused by a ruptured viscus or pancreatitis.

In my own practice I have used peritoneal

lavage for several years and in the last three years have incorporated continuous postoperative peritoneal lavage or peritoneal flush-sump aspiration technique following operative cleansing of the peritoneal cavity in grossly septic cases. The mechanism has remained simple in that two delivery catheters are placed in the upper abdominal cavity via stab wounds and a plastic multiperforated sump drain is placed in the pelvis. Flow rates of each line are usually in the range of 250-500 cc. per hour and the sump is connected to Emerson suction at 40 cm. of water. Strict intake and output record is maintained and the usual supportive fluids, electrolytes, vitamins, antibiotics and colloids as necessary are given intravenously. Nasogastric tube suction is continued until functional bowel activity has resumed.

An impressive reward of this therapy is the comfort enjoyed by the patient. I have never seen a patient suffer any cardiovascular overload and monitoring the lavage we find that what is infused comes out in the sump return. There have been no problems in introducing infection nor sump tubes eroding into viscera, blood vessels, etc. This procedure is usually employed for two to four days only until the aspirate is clear and there is dramatic improvement in the condition of the patient.

A few brief case summaries are as follows:

The first patient is E. M., a 77 year old white female, admitted with a five day history of abdominal pain, fever, vomiting and recent abdominal distension with board-like rigidity. Shortly after admission the patient suffered a hypotensive episode with cyanotic skin mottling — her B. P. at 80 systolic. Emergency laparotomy revealed a gangrenous appendix with an appendiceal abscess accompanied with a diffuse septic peritonitis. Over two liters of foul-smelling greenish fluid was evacuated along with removal of the gangrenous appendix and an old inflammatory abscess membrane. Multiple loculations of pus were broken up between loops of small bowel and generous peritoneal lavage was carried out using five liters of sterile saline solution. A metallic sump drain was placed into the pelvis and the wound closed following instillation of a gram of Chloramphenicol. During surgery the patient received a unit of whole blood, Isolyte E electrolyte solution and Solucortef.

Postoperatively the patient's condition dramatically improved. Sump drainage was discontinued on the third day and she received oral nourishment by the sixth postoperative day. On the tenth postoperative day the patient suddenly went into shock and expired. Autopsy revealed bilateral adrenal hemorrhages of both cortex and medulla along with a fresh 3 cm. left ventricular subendocardial infarct. The peritoneal cavity was remarkably clean at autopsy. The patient was receiving a diminishing dose of steroid at the time of her death. Previous serial E.K.G.'s were essentially normal in her postoperative period.

D. M. is a 12 year old boy admitted with a five day history of diffuse abdominal pain, fever and recent vomiting. Physical findings revealed a board-like abdomen with moderate distension. Initial surgery consisted of an appendectomy with peritoneal lavage and pelvic sump drainage for a diffuse septic peritonitis secondary to gangrenous appendicitis. He became increasingly febrile on the fourth and fifth postoperative days and had radiographic findings compatible with a right subphrenic abscess. He was re-explored on the sixth postoperative day and a massive purulent right subphrenic collection was evacuated. At this time bilateral suphrenic catheters were positioned along with right gutter and pelvic sump drains and continuous peritoneal lavage was carried out for some four days postoperatively. He continued to improve from this time forward with the exception of developing an isolated fecal fistula on the fifteenth post operative day. This spontaneously closed a few days later with local sump-flush catheter drainage. He also suffered a toxic myocarditis as well as basilar pneumonitis. These problems were treated with digitalis, IPPB, antibiotics, etc. with ultimate resolution. He was discharged in good condition on the thirtieth postoperative day.

A. M. an 81 year old white female was admitted with a myocardial infarction. Sixteen days following admission she was seen with a 48 hour history of lower abdominal discomfort and some nausea. The patient suddenly went into shock on the day of consultation and at that time her blood pressure was 80 systolic. Her skin revealed cyanotic mottling and she was semiconscious. There was definite guarding of both right and left lower abdominal areas and her white count was 24,000. Emergency laparotomy was done following rapid infusion of 5% glcose in

Isolyte E which improved her circulatory status. At surgery a gangrenous loop of incarcerated proximal ileum was found caused by a simple band adhesion. Resection of this ileal segment was done along with primary anastomosis and peritoneal lavage with some three liters of sterile saline. Delivery catheters were placed in the upper abdomen and a sump drain placed in the pelvis. Peritoneal lavage for thirty-six hours followed, with dramatic recovery of the patient. She was discharged nineteen days post-surgical. She suffered no complications relative to her surgical problem.

M. H. a 63 year old obese white female admitted with a history of severe lower abdominal pain, fever and nausea of four days duration. Marked guarding of both right and left lower quadrants was present. At laparotomy an acute sigmoidal diverticulitis with early peritonitis was found. Initial sigmoidectomy and appendectomy were carried out along with a primary anastomosis of the descending colon to the proximal rectosigmoid junction. Peritoneal lavage was instituted for 48 hours with over sixteen liters of sterile saline used for the continuous flush-sump aspiration technique. Her postoperative recovery was entirely uneventful and she was discharged on the 8th postoperative day.

F. G. a 64 year old obese white female admitted with severe lower abdominal pain, guarding and a silent abdomen. Emergency laparotomy revealed an early diffuse peritonitis with acute sigmoidal diverticulitis with abscess formation involving the left ovary. A left hemicolectomy was carried out along with a left salpingoophorectomy. A proximal descending colon to proximal rectosigmoidal colon anastomosis was then done.

Vigorous peritoneal lavage was performed along with continued postoperative lavage with sump drainage of the pelvis for 72 hours. Her postoperative recovery was marked by a moderately prolonged ileus. Oral nourishment was well tolerated within a week and the patient was discharged on a soft pureed diet with her incision healed without complications on her 11th postoperative day.

D. M. a 67 year old moderately obese white female was admitted with diffuse crampy abdominal pain, vomiting and fever of 103F. The abdomen exhibited marked tenderness with rebound and guarding. At laparotomy an acute sigmoidal diverticulitis with early peritonitis was found. A sigmoidectomy with primary anastomosis was done followed with peritoneal lavage of four liters of saline. Continuous peritoneal lavage was carried out for forty-eight hours using some 20 liters of saline via flush sump technique. Her postoperative course was marred by an isolated anastomotic leak which was controlled by conventional diverting proximal transverse colostomy. This was ultimately closed six weeks later with uneventful recovery.

In summary, peritoneal lavage is a safe and effective method of continuous debridement in diffuse septic peritonitis. It removes a multitude of bacteria, enzymes, toxins, necrotic tissue debris as well as contaminants from such catastrophic insults as perforated ulcer, perforated gall bladder, appendix or large or small bowel disruption. It assists in the hydration of the patient and in the reduction of dislocating extracellular fluid ordinarily responding to peritoneal inflammation.

In view of these benefits operative as well as continuous post-operative peritoneal lavage deserves acceptance as an integral part of the treatment of peritonitis.

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QUALITY MEDICAL CARE, COMPREHENSIVE PLANNING COUNCIL, AND MOTOROLA

Three somewhat differently motivated groups of people are involved in health care. Our patients comprise the largest in numbers and have recently been classified as *consumers.* The second of the three groups is the *payor* i.e., voluntary insurers, government, and employers such as Motorola and the third group is the *providers* of health care services, — the health professions and facilities.

Inflation of all costs of living, including labor have placed great stress on all concerned with health care. Costs as well as some recognized inequities in the delivery of health care have led to the development of government financed comprehensive planning couneils. We are currently witnessing these forces in acrimonious conflict in Arizona spurred by Motorola's charges against the Samaritan Health Services and the Tucson Medical Center regarding management practices. These problems coupled with the Comprehensive Planning Councils' authority to pass on any hospital expenditures in excess of $15,000, and the growing involvement of the Legislature and Arizona Health Planning Authority in these matters may well retard quality medical care and medical progress in Arizona unless the medical profession is allowed to and is willing to participate in innumerable committee meetings, and have effective representation in thse councils.

It is to be hoped that consumers, payors, and providers, all can be reasonable in their approaches to quality medical care. They must realize that the principles of cost and systems analysis popular with industrial management, in which cost accounting focuses on increased productivity and innovations are justified on this basis, if carried to extremes would wipe out unprofitable hospitals, and medical development, and injure the public. We encourage sound management and subsidy if necessary as the vehicles for quality medical care and continuing medical progress but urge a major watchdog and participating role for the professionals.

John R. Green, M.D.

Editor's Page

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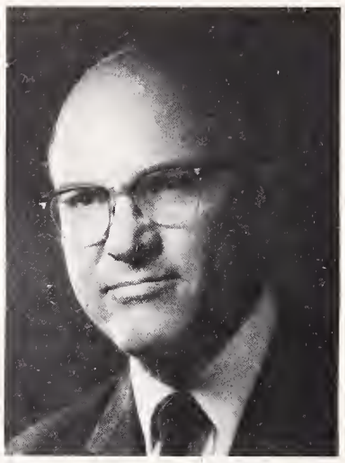
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President's Page

ON BEING HEARD



JOHN J. STANDIFER, M.D.
PRESIDENT

The American Medical Association doesn't represent the doctors and there is no way the practicing physicians can influence its actions. All top jobs are just passed around among a small group of old cronies.

I grow weary of hearing such statements as these from doctors who don't care enough or aren't well enough informed to know how to live with organized medicine. This type of pronouncement is solemnly stated by critics of all levels of our organizational structure, as if by the oft repeating of their credo they are excused from meaningful involvement.

The most reasonable criticism I have heard of AMA is that it is too democratic. Democracy, as we all know, is the least efficient form of government, but it does allow for expression from all elements of its constituency. The American Medical Association does this. To be effectively heard, you have only to be familiar with a few elements of the organization.

First, the delegates to AMA are elected by the house of delegates of the state medical associations and by specialty societies. These are all men who are readily accessible. If you wish to discuss an action or expression of AMA, past, present or future, you can call or, preferably, write Dan Cloud or Seymour (Sonny) Shapiro and I'm sure this happens rarely enough that your concern will receive their thorough consideration.

If you want an action presented to AMA it can be submitted by your county medical society to the Arizona Medical Association's House of Delegates as a resolution to the American Medical Association and, if passed by ArMA's House of Delegates it will be presented as a resolution to the American Medical Association.

When a resolution is presented to the Arizona Medical Association it goes to a reference committee on resolutions. Any member of ArMA can go to the reference committee meeting and present arguments for or against any resolution under consideration. These meetings are held at the time of the Annual Meeting, as announced prior to the meeting. These are hard working sessions of dedicated physicians representing medicine in the best way they know how. If a resolution doesn't come out of the reference committee in an acceptable form, any member of the House of Delegates can present his views, amendments and substitutions on the floor of the House for its consideration. The majority votes of delegates elected by county medical societies determines the actions of the Arizona Medical Association.

Between Annual Meetings of the Arizona Medical Association's House of Delegates proposals can be presented to the Board of Directors of ArMA by the county societies or through district directors elected by the House of Delegates. The Board of Directors can present resolutions to the American Medical Association. If any county has a proposal, a representative of that county is welcome at the Board of Directors meeting to discuss the proposal. The president is regularly invited and can attend or send his representative.

When a resolution is sent to AMA from a state medical association it goes through essentially the same process. Any member of AMA can discuss any resolution in the reference committee discussing the proposal. The members of the American Medical Association's House of Delegates can present their views on the floor of the House to achieve what they feel to be proper action.

When I was first elected a delegate to ArMA's House of Delegates Dr. Walter Brazie told me "Johnny, my boy, go to the reference Committees." As in so many other things he said, he was right. That's where the action is.

Dean's Page

HUMAN BEHAVIOR AND DEVELOPMENT

The recent medical school curriculum revision which you have read about in this journal has given birth to a new course that phase one students will begin on February 27, 1973. The title of this course is Human Behavior and Development. Approximately one hundred sixty-five class hours will be devoted to this course on a required basis.

An energetic and innovative subcommittee, chaired by Richard Willey, Ph.D., formulated the goals and the format for this course. These were enthusiastically accepted by the Curriculum Committee of the Medical School.

The objectives of this course are manifold, but basically, they relate to the physician's awareness of normal growth, development and behavior throughout the life-cycle of an individual. The concept of the patient as a total person will be continually emphasized. We want the young physician to be able to mesh the behavioral and emotional aspects of the principle age-specific life events. We want him to recognize the full impact of illness on these events and also the impact of these events on illness in a given patient.

Basic scientific data will be presented in conjunction with behavioral science data in virtually every class. Utilization of this knowledge hopefully will be thought of as a by-product of both disciplines. For example, when peptic ulcer is discussed, a review of G.I. pathophysiology will be presented. At the same time, the meaning of the patient's disease to him, to his family, and to th physician will be dealt with. How can we mobilize the patient's resources and interest to help him get well? What effect does his relationship with his wife, his girlfriend or his job have on his ability to get well?

Pregnancy and childbirth will be discussed in a similar manner. As the endocrinology of pregnancy is presented, the feelings engendered by pregnancy that are social, psychological and hormonal are also presented. One's expectations as a woman, as a wife, and as a mother will be explored in relationship to the birth process.

Human sexuality is dealt with in some depth as, for example, the physiological responses, or lack of response, coupled with the behavioral and emotional aspects of sexuality as it affects the individual. The physician's own feelings about his or her sexuality will determine his ability to be comfortable with patients' problems in this important sphere of their lives.

We will discuss chronic illness in all its ramifications. Specific patho-physiology will be reviewed, but the emphasis will be on the patient's feelings regarding his illness. How the physician helps the family deal with a problem of this kind, including discussion of community resources to help both with expertise and with the economics of long-term illness, will be covered.

The subject of death and dying will be taken up from all aspects. The physician's management of the dying patient and his family, and how the physician deals with his own feelings regarding death and dying will be explored.

Discussions will encompass the complex and frightening decisions to be made regarding the impressive machinery we have to keep people alive. Who decides when this machinery is utilized and who decides when the machinery is turned off? Since pure science cannot give exact answers to these questions we will provide legal, religious and sociologic input. We will explore the methodology and feelings involved in making these decisions.

The class sessions are designed for two and three hour time periods to allow maximum student participation and interaction. The approach will be truly interdisciplinary. Practicing physicians will be used as resource people. Sociologists, religious leaders and people from the legal profession will also be contributors.

Emphasis will be placed on interaction between students and faculty. Lectures will be held to a minimum. Patient interviews, videotapes, panel discussions and film strips will be utilized as teaching devices.

In summary, an attempt is being made to provide a climate of awareness in the young physician that will allow him or her to develop the sensitivity to deal with patients as people, and not as disease entities.

Editorial

MEDICINE AND MEDICAL MALPRACTICE A VISCERAL REACTION

GEORGE W. NORTHUP, D.O.
MESA, ARIZONA

EDITORS NOTE: Paul B. Jarrett, M.D., a member of the Secretary of Health, Education and Welfare's Commission on Medical Malpractice, recommends that the members of ArMA read the following statement.

These comments represent the reaction of one physician member of this Commission and does not necessarily represent the opinions of any other member or any specific medical organization.

It may be a minority opinion but it is not a minority report.

As the Commission's work draws to a close I do not feel that we physician members have conveyed adequately the reasons why we react to the malpractice problems as we do. We have adequately demonstrated our reactions but not necessarily our reasoning. Because I believe it is necessary that all segments of the medical malpractice problems be better understood I have allowed myself the luxury of reaction without due care to be unbiased or objective. These comments are biased and they are subjective.

This is essentially a "gut reaction." The "gut reaction" of a single osteopathic physician. But perhaps it is pertinent to the purpose of this Commission to express this type of visceral reaction for it does account for some of the misunderstandings with which medicine and society must contend.

Medicine is a proud profession — on occasions too proud. It is true, as has been repeated many times, that the quality of medical care in this country is the best in the nation's history. And despite defensive statements to the contrary it is not equally accessible to the consumer — regardless of socio-economic status, race and color. Fortunately this is a changing condition but not fast enough to meet the demands and needs of

Presented, with permission, by George W. Northup, D.O., Past President of the American Osteopathic Association, Editor of the American Journal of Osteopathy, and Member of the Commission on Medical Malpractice at its meeting on December 16, 1972. This manuscript will appear in the February issue of the AMERICAN JOURNAL OF OSTEOPATHY.

sizeable segments of our population. Perhaps we will never be satisfied and this is good.

But as a physician I live in an aura of fear; fear of suit. Fear unfortunately contributes to hostility and rarely contributes to constructive action.

Medicine has some bad doctors and some bad health care institutions. We are not proud of them and are equally concerned with their correction or elimination. Some do not believe we have this concern but it is true. However, it is my opinion that if this could be corrected over night the "malpractice problem" or, better stated, the professional liability problem would remain.

This Commission has heard the report that in a general examination of suits filed approximately ⅓ of all medical malpractice cases surveyed actual malpractice existed. Whether this figure is too high or too low I can not critically evaluate. But it must be admitted that there is a sizeable volume of cases not directly attributal to actual medicine malpractice — and I am not convinced the remainder of the problem has been so thoroughly studied as it needs to be.

The professions of medicine continually need to be improved. This will always be true. And, if I may be permitted a show of what I conceive to be justifiable pride, medicine has done and is doing as good and as concientious a job in this regard as any organized profession. But there are gaps in this program of self-improvement, visible gaps that must be closed.

Recommendations have flowed from this Commission suggesting how medicine might improve itself hopefully leading to an amelioration of the professional liability problem. In general the physician members have gone along with these suggestions which have come with sizeable origin and support from the consumer, legal profession, the insurance industry, government and from medicine itself. As one member of the general medical profession, I feel that many of these suggestions are excellent. Some are redundant because they are already being accomplished. Some are very difficult to implement albeit desirable.

The house of medicine feels belabored. Medical organizations are trying their best to overcome their deficiencies but, in my opinion, medical malpractice litigation is not the best incentive to improvement. It places medicine in an adversary position and hostility is too often the result. This hostility and fear has demonstrated itself repeatedly during the hearings and meetings of this Commission.

As a physician I seek no special immunity from responsibility for our professions of medicine. But I do seek understanding; understanding of why we react as we do and some of the questions and reasons for it.

Unfortunately a medical degree does not confer an intelligent knowledge of government, law, insurance or consumer actions. Medical legal problems, complexities of the insurance industry, governmental function and consumerism are subjective areas of intellectual destitution for most physicians and ignorance breeds fear. It may be hard to believe, but we are a frightened profession.

Doctors feel "put upon." He feels nude on the corner of the main street of life. He often tries to cover himself with pride and occasional arrogance only to find himself being castrated. He really doesn't want to believe the hostility he feels and often interprets it as being greater than it is.

Medicine, in my opinion, needs a greater inner humility. Its defensive pride is often translated into what appears to be arrogance — its fears to hostility. But having humility and being humbled by outside pressures are two different things.

Physicians must demonstrate to their patients a rational confidence — often more than the physician really possesses. The faith of a patient in his doctor is important to the patient and his physician. Faith is a powerful therapeutic modality and the physician continually feels that it is being eroded by sometimes justified and frequently unjustified attack.

Community reputation is a socio-economic asset for a physician. The malpractice problems, he believes, tends to destroy this. His self-interest in his reputation and credibility is a far greater personal concern than the availability of professional liability insurance and their cost.

The portrait of a doctor, seemingly portrayed by some, as an over-priced, callous, incompetent, inhuman individual, disturbs his ego. I am told that government officials, lawyers, insurance specialists and consumers also have egos that get disturbed as well — and reactionary responses to these ego threatening situations does not always result in rational behavior. But our psychologists tell us that egos, when not over-developed, are necessary for healthy psychological life.

Doctors are citizens too — with both rights and responsibilities. We are not a special class to be segregated into a socio-economic ghetto for special privileges, special rewards or special punishment. We, too, have civil rights.

Medical malpractice problems *are* socio-economic in nature. An objective study of its resists neat compartmentalization into medical, legal, insurance, government and consumer issues. This has been one of the problems of this Commission and has resulted in a frequent wanderlust into the never-never land away from the Commission's charge. Granted that the Commission had to divide the issue to accomplish anything. But there comes a time when the parts must be viewed in its unity or the total problem becomes lost in specifics. The operation can be successful and the patient can die.

Medicine is my sole area of alleged expertise. The recommendations directed toward the medical establishment by this Commission have been many. In most instances, these recommendations have been supported by a majority of the physicians on this Commission. We have debated individual issues and voiced individual dissent. But it can not be said we ever voted as a bloc.

Medicine is not a union. Its lobbying strength is frequently over-estimated. I sincerely hope that medicine is never unionized — for medicine is essentially an art to which is brought every available and useful scientific fact. Medicine is not an exact science with easily predictable good or bad results. Man, the objective of medical concern is a totally uncontrollable variable.

Drugs can be standardized — but not people. This simple statement implies some of the difficulties in rendering health care and the problem of avoiding distressing and disastrous results from diagnostic and therapeutic procedures.

Despite the fact that many physicians know little about law, insurance, government or consumer organizations we react to our many overlapping concerns. Sometimes our responses are intelligent and sometimes less so. But respond we do. Hopefully some of the foregoing comments shed light on the reasons behind these responses.

As a physician I hesitate to react to legal, insurance, governmental and consumer issues because I am sure there is much I don't know — much less understand about the intracies of these problems. For example law and lawyers often leave me completely baffled. Few physicians are at ease in a court room. It is a foreign land and a foreign language. Perhaps because of this undue fear exists among physicians as they respond to the due process of law. In fact, the role of the physician becomes that of the consumer as far as law, insurance, government and consumer-

ism is concerned. Sometimes we physicians feel the need for an "informed consent" in these areas.

We physicians, as consumers of the product of these groups feel the need oftentimes of a statement of "physicians rights." We, too, hear much of the responsibilities of physicians — but little of rights to pursue our profession in responsible freedom.

Physicians are urged to clean out the incompetent, the unskilled and misfits in the house of medicine. We concur. But some of us feel that the same zeal being applied to riding medicine of its misfits is less zealously applied to the legal profession; insurance, industry and consumers. Bad doctors contribute to medical malpractice problems. But do not bad lawyers, bad insurance companies, bad government and bad consumers contribute to the problem? Do the Commission recommendations adequately protect the physician against these evils as well?

We physicians don't often read the small print in our insurance coverage. We should. But when we read we frequently do not understand the language much less the meaning. Are not we entitled to an "informed consent?" Medicine is told to seek its own information concerning the risks of poor liability insurance. Isn't this as inappropriate as to tell the patient to seek his own information concerning his informed consent relative to the risk of medical procedures? Should not the American Insurance Association or some similar national organizations provide suitable guidelines to help in judging what is sound professional liability insurance and how to judge the fiscal responsibility of the insuranee companies offering us policies?

In my opinion one of the major areas of misunderstanding and lack of mutual trust is in the areas of the relationship between law and medicine. The misunderstanding between lawyers and doctors has surfaced several times in the course of the Commission's hearings. And all of the bad relationships between the legal and medical professions does not solely exist at the malpractice level. The ethics and level of cooperation between medicine and law in several other areas is troublesome. There seems to me to be a growing need for lawyers and doctors to sit down and discuss their numerous contacts in other areas of involvement as well. It seems to me that bridges of trust and cooperation need to be built between these two professions — not only in response to our own self interests — but primarily, in the public interest as well.

Consumerism is a magic word in our contemporary society. No one knowingly wants to offend the consumer. But consumerism as a viable movement in this country sometimes defies precise definition. Who do the consumer representatives represent? All consumers? The poor or near poor? Ethnic groups?

Many of us believe in the principle of consumer representation. But who selects the consumer representative and from which group? What does one look for in a good consumer representative? What should our methodology of selection be?

And, if there are bad doctors, bad lawyers, bad insurance companies are there not bad consumers? Society should be protected against bad professionals but should they not also be protected against bad consumers as well?

Physicians often feel that consumers should have no special immunity against wrong doing? Some of us are led to believe that there are some purely litigamous minded consumers. Some of us feel, right or wrong, that some consumers engage in a type of "medical-legal lottery" and attempt to parlay an untoward medical event into a financial windfall.

Medicine seeks no special protection of its own. But should there not be protective legislation against the person, whether doctor, lawyer or consumer, who abuse the courts of justice for purely financial gain?

The above reactions and questions are just some of the more visceral reactions physicians have in areas where they have too little if any expertise. So, what of this Commission and its report?

This has been, in my opinion, a good commission. We quickly learned that despite our varied and considerable expertise, we were less than perfect. We have argued and voted against each other many times. Perhaps most significantly we did not vote in blocs. We voted as commissioners with a common problem and a common commitment.

The report of the commission which was not available at the writing of these comments, will not become a Magna Charta of Malpractice. But I am sure all of us hope it will be the beginning of a road toward elevating the destructive tensions, misunderstanding and the rising costs of the malpractice problem in this nation.

Topics Of Current Medical Interest

SCANDINAVIAN ADVENTURE

A 14-day Scandinavian Adventure holiday for members of the Arizona Medical Association was recently announced by President John J. Standifur, M.D.

Departure date for the trip to Stockholm, Helsinki and Copenhagen is July 30th from Phoenix.

The special Scandinavian Adventure price of $868 includes chartered round trip jet transportation, deluxe hotels, two meals daily (American breakfast in your hotel and gourmet dinners at a choice of the finest restaurants in each city), tips, transfers and many other extras to make your trip more enjoyable. The baggage allowance has been increased to a generous 70 pounds, more than adequate allowance for shopping and your golf clubs.

There is absolutely no regimentation on the Scandinavian Adventure. You are free to go where you want, do what you want — when you feel like doing it! You may join in group activities or explore on your own.

A special Scandinavian Adventure escort will travel with you throughout the trip. In Stockholm, Helsinki and Copenhagen you will have five personable hosts to assist in arringing sightseeing, shopping, golfing, nightclubbing and other activities.

Fly direct to Stockholm from Phoenix via chartered World Airways private jet with first class service aboard, including stretch-out, extra-comfort seating, the finest food and complimentary cocktails and champagne.

For four days in Stockholm, you will stay at the new luxurious Sheraton-Stockholm Hotel located in the very center of town. You will be welcomed with outstanding accommodations, assuring you of a delightful and memorable stay.

Stockholm is a city set on islands and rocky bluffs overlooking a lovely harbor. This still growing metropolis of strikingly beautiful landscape and handsome modern architecture is a fascinating mixture of old and new where you'll spend your days in discovery. You'll thrill to the magnificent Millesgarden sculptures, the stateliness of Drottningholm Palace and its charming Court Theatre. Visit Old Town whose youthful heart is still full of laughter. Stroll cobblestone streets, wander into quaint antique shops. Peek into handkerchief sized courtyards and explore 13th century alleys.

You'll find more delights in the Swedish shops — glistening Orrefors glass and crystal, pottery, pewter and silverware. There's also famous Swedish cutlery and tableware, textiles, luxurious furs and glittering jewels.

The incredible Swedes with their exuberant zest for life must have invented happiness — and good food is part of that happiness. Dine . . . in splendor at a choice of elegant restaurants featuring lavish smorgasbord tables of unending taste-tempting delights. Try a "snaps" or aquavit with your meal. Or relish the delicate flavor of cloudberries in cakes and ices.

From Stockholm you can take a short flight to the fascinating Isle of Gotland to see the ancient walled city of Visby. Or visit the Uppsala-Sigtura Lake Country of exquisite churches and old pieturesque towns. You'll also want to marvel at the Wasa — the carving encrusted 17th century warship recently excavated and being restored in Stockholm harbor.

You'll also have the opportunity to take an optional side trip to Oslo . . . Norway's capital, spectacularly situated on a glistening blue fjord. There's so much to see — the Kon Tiki raft,

Viking Ship Museum, Olympic Ski Jump and the charming Norse Outdoor Folk Museum.

Then on to Helsinki for four days in the sparkling capital city of Finland called the white city of the North. You can't help loving Helsinki and its friendly atmosphere. A place to explore with time to enjoy its special wonders. Finland is a delightful, vigorous country . . . a land, where the Midnight Sun shines through most of the long summer nights.

You'll stay at the Hesperia Hotel. Here you can relax in your room or in the luxury of a Finnish Sauna bath. You'll have a choice of Helsinki's finest restaurants. The food is marvelous. Be sure to try Kal-Kukko — a strange but delicious blend of port and fresh-water herring in a pastry loaf, Piirakka — Karelian rice pastry and Finnish pancakes served with lingonberry sauce.

Cruise one of Finland's bright waterways past gaily painted wooden houses into the vast wilderness of spruce and birch forest. There is fascinating scenery as far as the eye can see. The fairytale touch of majestic forests is interspersed with a coastline of islands famous for their beauty all over the world.

You'll want to buy everything in sight . . . famous Arabia rice china, pottery, karkulalittala glass and Finnish jewelry, "Ryijy" rugs and ornaments.

You won't want to miss the overnight excursion to Leningrad. Peter the Great's St. Petersburg was founded in 1703 as Russia's "Western window on the world." Take a look through that window at great pastel colored palaces and magnificent onion-domed cathedrals built by the Czars. It's a city of stately baroque buildings, towering steeples and graceful bridges where Count Stroganov, created Beef Stroganov and Chicken Kiev is a specialty. You will also visit the Hermitage Museum, former winter palace of the Czars, overwhelming in the richness of its art collection.

And there's still more — four days in "wonderful, wonderful Copenhagen" the fun-loving Danes' cosmopolitan capital. It's Denmark's largest city — a friendly happy place of spires and towers and winding streets.

Copenhagen's gay and carefree atmosphere will tempt you to explore. Stroll the streets and twisting narrow lanes that end in impressive fountained squares. The series of rich impressions is endless.

The bright and attractive centrally located Sheraton-Copenhagen Hotel will greet you warmly with every comfort and convenience. Enjoy the superb view from the hotel's rooftop panoramic bar. Or dine leisurely in the King's Court dining room where international cuisine is the specialty.

The Danes are genial hosts — bars never close and the food is wonderful and all too plentiful. The uniquely Danish version of smorgasbord features over 200 varieties of delicious open-face sandwiches — each a meal in itself. Don't pass up the cheese, seafood or the infinite variety of pastries — they're all national specialties.

You'll revel in the carefree carnival atmosphere at Copenhagen's famed Tivoli Gardens. A whirl of gaiety, illuminated dancing fountains, marching bands, non-stop cabaret entertainment and spectacular fireworks — all a short walk from your hotel.

Try to resist the tempting window displays and bulging boutiques. They're bursting with Danish modern silver, porcelain, pewter, furniture, jewelry and superb collections of antiques. These are the shops where Santa Claus finds all his loveliest gifts.

Lighthearted adventure enchants you in this Danish fairyland . . . a world of tiny thatched roof cottages with storks nesting on chimney tops. A country of moated Renaissance castles like "Hamlet's" Elsinore Castle. You'll fall in love with the little Mermaid, perched on a rock, gazingt out to sea. She symbolizes all that is Copenhagen and Scandinavia — a smorgasbord of everything progressive, prosperous, peaceful, bright and exquisite. Scandinavia is more than a place — it's a frame of mind, a philosophy — a way of life. You're in Hans Christian Andersen's childhood fantasy world where all your holiday dreams come true.

Travel through the oldest kingdom in Europe — Vikingland. Sparkling, clean, majestic — no wonder the Vikings lived here.

The Scandinavian Adventure can give you all this — in a completely new concept of travel that stretches vacation dollars farther. And, there is absolutely no regimentation on this luxury carefree vacation.

If you have not yet sent in your reservations for our Scandinavian Adventure, do so right away. Or contact Mrs. Pat Ball at the Association office for any additional information you may need. Space is limited, so make your reservations now. We don't want to leave without you.

ArMA Medical History

TERRITORIAL QUARANTINE

DRY GULCH JAKE



R. N. LOONEY, M.D.

Some may recall that these pages recounted the, "Quarreling and Quarantine," episode, in Douglas, at the time of a small pox epidemic.[1] About 15 cases and 4 deaths occurred before it was controlled. Dr. Miner of the adjacent metropolis of Bisbee was then County Superintendent of Health for Cochise County. He had been rebuffed when he asked for closure of certain business establishments in Douglas in which the cases seemed to originate, a laundry was one, and an undertaking parlor was another!

He then asked for help from Dr. Looney, the State Health Commissioner, who conducted the business of the State while continuing his practice in Prescott. After discussions with state officials and more especially with Governor George W. P. Hunt, Dr. Looney went down to Douglas with full authority to "declare martial law" if there was any further resistance by the citizenry of Douglas.

Some spirited articles in the Douglas Daily Dispatch in March, 1912 were quite vociferous in their condemnation of the interference of Dr. Looney but when presented with the alternative of "martial law, to prevent any intercourse by citizens of Douglas either through the mail, by train or any other means with any other part of the county," but when presented with this

alternative, there was conversation but also cooperation and no martial law was invoked. The small pox epidemic soon died out.

The quarantine maneuver by Dr. Looney in his home town of Prescott was a bit more delicate and subtle, and it has recently been recounted by Budge Ruffner in his collection of Arizona antedotes.[2] This is what he had to say under the title of "Public Health."

"It was a very delicate situation and the old doctor knew it. This was the type of thing that made him regret he had ever agreed to serve as county health officer. It was a fact, however, and he had to deal with it. If it were handled too openly, if too much were made of it, there would be severe economic implications for the town. Then, too, there would be that segment of the community which would find it offensive; the health of the town, however, had to be maintained.

At any cost, outright panic must be averted, he thought. It would be a mistake to make a public announcement, but the menace itself had to be contained. He knew this type of health problem should not become common knowledge; it would embarrass the county attorney and the sheriff, the city administration and, oh, so many who pretended the impossibility of such a development. The unsuspecting public must be protected.

"The girls" themselves were no problem. They eagerly sought the medical attention which would return them to, at least, an economically fruitful life. A garish red quarantine sign on the front door was bound to look bad; it would be blunt and frightening and have an impact on the Prescott public which could not be quickly erased.

A diplomatic, even euphemistic, type of poster was the only answer, the doctor concluded; worded to discourage a prospective patron, yet with no implication of hazard to health or morals. The old man sat down at his roll-top desk, moistened his cigar, and, in his Tennessee pace, methodically printed the sign with a black crayon.

When he finished he carried it down Gurley Street, one block west of the Plaza, to the brothel and tacked it to the front door of the old brick building. Only three words but it told the story:

CLOSED FOR REPAIRS.

BIBLIOGRAPHY

1. "Quarreling and Quarantine," Arizona Medicine, #1 Volume 19, pp 65-66, 1962.
2. All Hell Needs Is Water — by Budge Ruffney, University of Arizona Press, 1972, pp 53-54 by permission of the author.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

SCIENTIFIC ASSEMBLY COMMITTEE

The meeting of the Scientific Assembly Committee of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, Sunday, December 10, 1972, convened at 10:16 a.m., Wilfred M. Potter, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held 8/20/72 were approved as distributed.

HONORED GUESTS

Mr. Robinson reported that C. A. Hoffman, M.D., President of the American Medical Association, has accepted our invitation to speak to the House of Delegates on Tuesday, April 24, 1973, and Russell B. Roth, M.D., President-Elect of the American Medical Association, will be the guest speaker at the president's banquet on Friday, April 26, 1973.

EDUCATIONAL GRANT PROGRAM

Mr. Robinson reported that the following firms have contributed toward the scientific program to date:

Hoechst Pharmaceuticals	$ 200.00
Armour Pharmaceuticals Co.	250.00
Geigy Pharmaceuticals	200.00
Ciba-Geigy Corporation	250.00
Travelers Insurance Companies	250.00
Roche Laboratories	250.00
Eli Lilly &Co.	250.00
National Casualty Co.	250.00
A. H. Robins	200.00
TOTAL	$2,100.00

ABORTION PANEL

It was determined that this panel would be composed of the following:

Richard K. MacMillan, M.D. — Moderator

Representing the Arizona Right to Life Committee:

Paul H. Androeini, M.D.

Fred Mecklenburg, M.D.

Representing Planned Parenthood Association:

Robert H. Tamis, M.D.

Robert L. Wechsler, M.D.

AMBULATORY SURGICAL FACILITIES — WHOSE PROVINCE?

It was determined that the subject breakfast panel would be composed of the following:

Donald Brayton, M.D., Moderator

John P. Dillon, M.D.

Laurence M. Linkner, M.D.

Wilfred M. Potter, M.D.

Wallace A. Reed, M.D.

SCIENTIFIC PROGRAM

It was agreed that in addition to the above breakfast panel and a breakfast panel on H.M.O.'s scheduled for Thursday, April 26, 1973, the following would be the scientific program for the 1973 meeting:

THURSDAY MORING	Convention Center Room A-1 (150)	Convention Center Room A-2 (150)	Above Hotel Lobby Directors Room (40)	Above Hotel Lobby Embassy Room (90)
9-9:30	Current Concepts in Ophthalmologic Plastic & Reconstructive Surgery *Robert Dryden, M.D.*	H.M.O. Workshop *Donald Brayton, M.D.*	Dissection Aneurysm of the Thoracic Aorta as a Cause of Acute Myocardial Infarction. *Marcus D. McDivett, M.D.*	Emergency Care and the Emergency Physician. *James C. Brill, M.D.* *Leonard F. Peltier, M.D.*
9:30-10	Post-Traumatic Headaches of Cervical Origin *Jaime Vargas, M.D.*	*Donald DuBois, D.P.H.* *Allan Harris*	Angiography-Major Role in the Diagnosis & Therapy of Gastrointestinal Hemorrhage. *William A. Renert, M.D.*	*Donald F. Schaller, M.D.* *James L. Schamadan, M.D.*
10-10:30	Prenatal Stilbesterol & Vaginal Carcinoma In Subsequent Daughters. *Leo Lagasse, M.D.*	*Charles E. Lewis, M.D.*	Muscle Disease: A Multidisciplinary Approach. *Lawrence Z. Stern, M.D.*	*Donald Skinner, M.D.* WORSHOP
10:30-11	RECESS	RECESS	RECESS	RECESS
11-11:30	Contraceptives and Complications. *George Bray, M.D.*	Bilateral Subcutaneous Mastectomy & Prosthetic Reconstruction. *Jean P. Angelchik, M.D.* *Richard H. Wahl, M.D.*	Management of Early Breast Cancer. *Herbert I. Machleder, M.D.*	Flight Accidents with Physicians as Pilot-in-Command. *John C. Duffy, M.D.*
11:30-12	Family Planning Counseling: Decision Making in the Choice of Method. *Donald R. Ostergard, M.D.*	Cervical Esophagoscomy and Improved Technique for Alimentation of the Debilitated Patient. *Paul Ward, M.D.*	WORKSHOP	Emergency Treatment of Venomous Bites and Stings. *Jack O. McFarland, M.D.*
THURSDAY AFTERNOON	**Convention Center Room A-1**	**Convention Center Room A-2**	**Above Hotel Lobby Directors Room**	**Above Hotel Lobby Embassy Room**
2-2:30	Hypoglycemia—Fact or Fancy. *George Bray, M.D.*	Contemporary Issues In Permanent Contraception. (Sterilization). *I. M. Cushner, M.D.* *Richard Ehrlich, M.D.* *Donald R. Ostergard, M.D.* *Robert Pasnau, M.D.*	Status of Total Knee Joint Replacement. *Gerald Finerman, M.D.*	Head & Neck Neoplasms. *Yosef Pilch, M.D.* *Paul Ward, M.D.*
2:30-3	Preliminary Evaluation of New Non-Steroidal Anti-Inflamatory Agents In Rheumatoid Arthritis. *DeWitt W. Englund, M.D.* *Benjamin K. Harris, M.D.* *Sanford H. Roth, M.D.*	WORKSHOP	Non-Invasive Techniques for the Early Detection & Prevention of Strokes. *Mark M. Kartchner, M.D.* *William S. Masland, M.D.* *Lorin P. McRae, Ph.D.* *Frank D. Morrison, M.D.*	WORKSHOP
3-3:30	RECESS	RECESS	RECESS	RECESS
3:30-4	Abortion Panel *Richard K. MacMillan, —M.D.—Moderator*	Management of Abdominal Aneurysms. *Herbert Machleder, M.D.*	Indications & Results of Total Hip Joint Replacement. *Joseph A. Dupont, M.D.*	Ileus—A Term for All Physicians. *H. Stephens Thomas, M.D.*
4-4:30	*Paul H. Androcine, M.D.*	Management of Malignant Melanoma. *Yosef Pilch, M.D.*	*Gerald Finerman, M.D.*	Venereal Disease.
4:30-5	*Fred Mecklenburg, M.D.* *Robert H. Tamic, M.D.* *Robert L. Wechsler, M.D.*	The Treatment of Traumatic Disruption of the Descending Thoracic Aorta. *Charles M. Rucker, M.D.*	*Paul J. Nichols, M.D.* *John R. Schwartzmann, M.D.* WORKSHOP	*John Martin—Center for Disease Control*

FRIDAY MORNING	Convention Center Room A-1	Convention Center Room A-2	Above Hotel Lobby Directors Room	Above Hotel Lobby Embassy Room
9-9:30	The Adolescent Clinic: A Model & Profile. *Lonnie K. Zeltzer, M.D.* *Paul M. Zeltzer, M.D.*	Development of Criteria for Quality Assurance of Ambulatory Child Health Care. *Hugh C. Thompson, M.D.*	Current Concepts in Psychosomatic Medicine. *Robert Pasnau, M.D.*	Diet, Cholesterol, Lipoprotein and Heart Disease. *George Bray, M.D.* *Philip Levy, M.D.*
9:30-10	Immunotherapy of Cancer-Present Status and Future Potential. *Yosef Pilch, M.D.*	The Hyperactive Child. *Edward R. Ritvo, M.D.*		
10-10:30		Infantile Autism. *Edward R. Ritvo, M.D.*	WORKSHOP	WORKSHOP
10:30-11	RECESS	RECESS	RECESS	RECESS
11-11:30	Use & Abuse of Gamma Globulin. *Vincent A. Fulginiti, M.D.*	Implications of the Australia Antigen Assays. *Gary L. Gitnick, M.D.*	Obstructive Uropathy In Infants. *Melvin L. Cohen, M.D.* *David S. Trump, M.D.*	Normalcy, As Seen By The Psychiatric Physician. *Warren Gorman, M.D.*
11:30-12	Evaluation of the Child with Proteinuria and Hematuria. *Fred G. Smith, Jr., M.D.*	Giardiasis As A Cause of Recurrent Diarrhea. *Michael L. Epstein, M.D.* *Sam L. Mortimer, M.D.*	Atherosclerosis In The Pediatric Age Group. *Glenn M. Friedman, M.D.*	Changing Concepts of Psychiatric Problems In the Aged, With Implications For Diagnosis & Management. *Jacob D. Hoogerbeets, M.D.* *John S. LaWall, M.D.*
FRIDAY AFTERNOON	**Convention Center Room A-1**	**Convention Center Room A-2**	**Above Hotel Lobby Directors Room**	**Above Hotel Lobby Embassy Room**
2-2:30	Malignancy of the Urinary Tract with Particular Focus On Cancer of the Bladder and Prostate. *Donald Skinner, M.D.*	Anaerobic Infections & Host Defense Mechanisms. *David Rifkind, M.D.*	Psychotherapy Versus Behavior Modification. *Edward R. Vitvo, M.D.*	Secondary Gain, Everybody's Cop-out. *R. D. Martin, M.D.*
2:30-3		A New Look At Solitary Pulmonary Nodules. *M. H. Nathan, M.D.*	WORKSHOP	A Review of Psychotropic Medications & Their Use In General Medical Practice. *Stephen C. Scheiber, M.D.*
3-3:30	RECESS	RECESS	RECESS	RECESS
3:30-4	Care of the Ischemic Diabetic Extremity. *John Max Johnson, M.D.*	Problem Oriented Medical Record. *L. L. Fairbanks, M.D.*	1. Management of Patients with Genitourinary Malignancy. *Richard Ehrlich, M.D. Moderator* *George W. Drach, M.D.* *Donald Skinner, M.D.*	Hepatitis – Acute & Chronic. *Gary L. Gitnick, M.D.*
4-4:30	Nephrogenic Diabetes Insipidus Secondary to Declomycin. *E. Eugene Miller, M.D.* *Theodore A. Palo, M.D.*	*Stephen C. Scheiber, M.D.*	2. Malignancy of the Genitourinary System In Childhood. *George W. Drach, M.D. Moderator* *Richard Ehrlich, M.D.* *Donald Skinner, M.D.* *Fred G. Smith, Jr., M.D.*	
4:30-5	Bone Scanning for the Clinician. *Robert E. O'Mara, M.D.*		WORKSHOP	WORKSHOP

SCIENTIFIC EXHIBITS

Of the twenty-two applications for scientific exhibit spaces, the following twelve were accepted (space is limited to 12 exhibits).

1. William E. Crisp, M.D.
 Cryosurgical Treatment of Gynecologic Neoplasia.
2. Arthur Shiff, M.D.
 Colonoscopy — Clinical Indications.
3. William Russell, M.D.
 Colposcopy.
4. Thomas F. Minas, M.D.
 Argon Laser Photocoagulation of Diabetic Retinopathy.
5. Louis Kossuth, M.D.
 Rabies in Arizona.
6. William Renert, M.D.
 Cutaneous Manifestations of Gastrointestinal Disorders.
7. Preston Smith, M.D.
 Transnasal Fiberoptic Bronchoscopy.
8. Theodore Ditchek, M.D.
 Clinico-Roentgenologic Patterns of Coccidioidomycosis in Children.
9. Jerome Robinson, M.D.
 Radioisotope Exercise Testing & Myocardial Image Perfusion Studies.
10. Alex Newman, M.D.
 Peripheral Bone and Joint Manifestations of Systemic Disease.
11. Belton P. Meyer, M.D.
 The Arizona State Newborn Transport and Intensive Care Program.
12. Robert Stark, M.D.
 Medical Education Committee.

RETIRED PHYSICIANS

The committee was advised of the Board of Directors' directive that retired physicians would be admitted for a $5.00 registration fee instead of $15.00 as in the past.

TEXAS MEDICAL ASSOCIATION SURVEY

Mr. Robinson reported on the subject survey which indicates that more and more medical associations are charging registration fees for their scientific sessions held in conjunction with annual meetings.

Meeting adjourned 1:06 p.m.

Edward Sattenspiel, M.D.
Secretary

4th International Congress of LYMPHOLOGY

Under the auspices of the University of Arizona College of Medicine
March 6-10, 1973. Tucson Community Convention Center, Tucson.

CONGRESS ORGANIZING COMMITTEE

IRVING ARIEL, M.D.
Professor of Clinical Surgery
New York Medical College
New York, New York

MAX L. BOONE, M.D.
Professor of Radiology
and Chief of Radiotherapy
University of Arizona
Tucson, Arizona

THEODORE DITCHEK, M.D.
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Tucson, Arizona

MARLYS HEARST WITTE, M.D.
Assoc. Professor of
Surgical Biology
University of Arizona
Tucson, Arizona

The Fourth International Congress of Lymphology to be held March 6-10, 1973 in Tucson will gather together the world's foremost authorities in lymphology—the study of lymph nodes, lymphatics, lymphocytes, and lymph in health and disease. One hundred and eighty-four speakers will represent 28 countries.

The ultra-modern spacious facilities of the new Tucson Community Convention Center will be the site of this meeting, which is co-sponsored by the University of Arizona College of Medicine and the International Society of Lymphology. The Congress participants will delve into such diverse topics as lymphatic spread of cancer, tumor immunology, improved methods of tumor detection and diagnosis, relationship of viruses to neoplasia, radiotherapy and chemotherapy of lymphomas, endolymphatic therapy, radical tumor surgery, microcirculation of lymph, structure and function of the lymphocyte, transplantation biology, lymphvascular surgery, edema including lymphedema and effusions, and protein-losing enteropathy and nephropathy.

The Congress, which will be conducted entirely in English, is divided into two simultaneous sessions arranged in a flexible format consisting predominantly of symposia and workshops with ample time available for free and open discussion. This meeting is approved for 25 (or hour-for-hour) credits by the Arizona Medical Association, American Academy of Family Physicians and American Medical Association Physician's Recognition Award. Nurses and paramedical personnel are welcome. Registration fee is $85.

Just prior to the Congress on March 3-5, a post-graduate course in ADVANCES IN LYMPHOGRAPHY will be conducted by a distinguished international faculty at the University of Arizona College of Medicine. Registration fee is $150.

Exciting social activities are planned for congress participants and their families. These include moonlight barbecues, visits to Old Tucson, Arizona-Sonora Desert Museum, Mexico, and Grand Canyon, wagon trains, horseback riding, nature walks, swimming, tennis, golf, and ARIZONA SUNSETS.

For more information on the Congress, contact:
Drs. Charles and Marlys Witte
Department of Surgery
University of Arizona
College of Medicine
Tucson, Arizona 85724

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically,* used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

NEOSPORIN® Ointment

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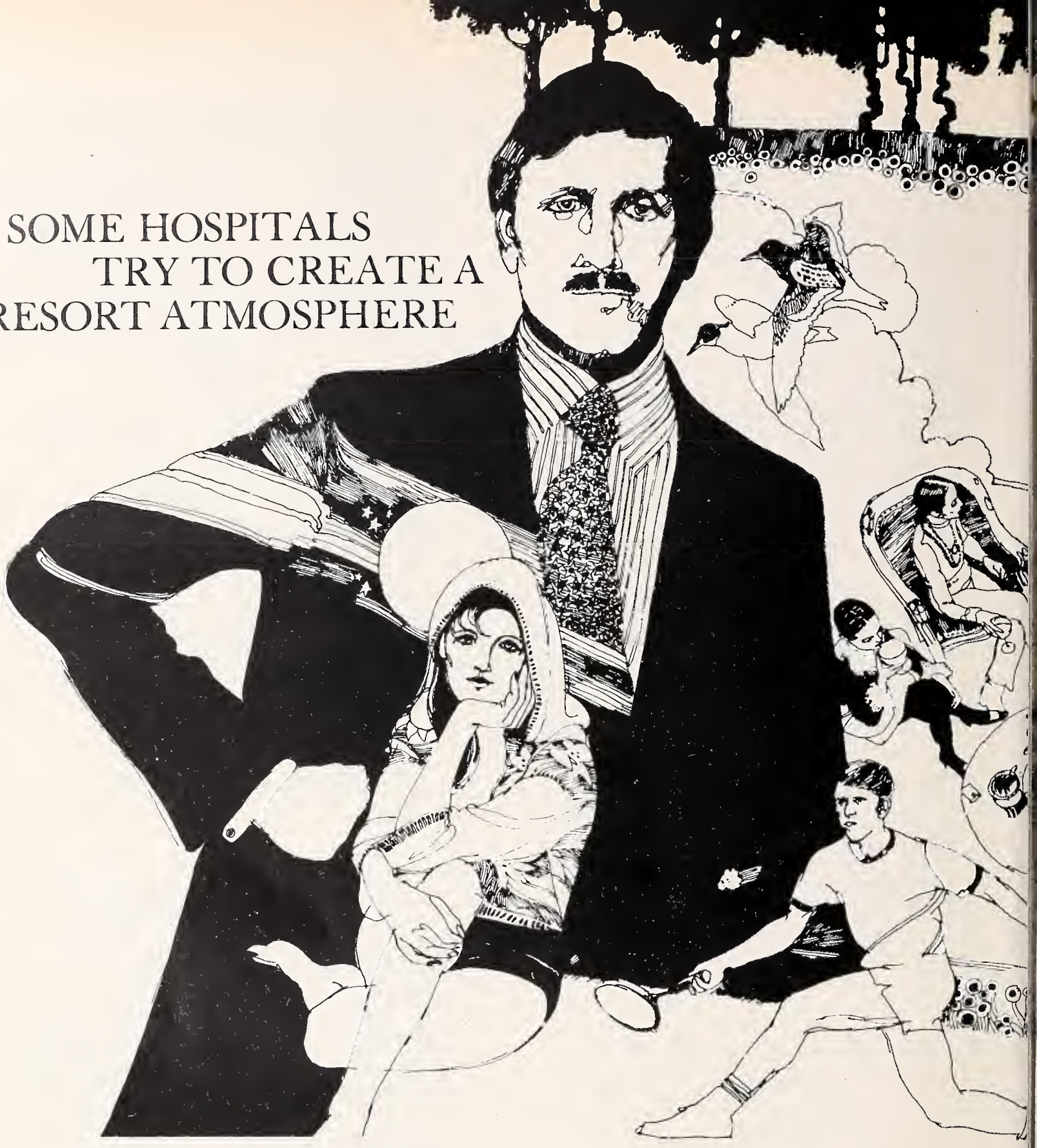
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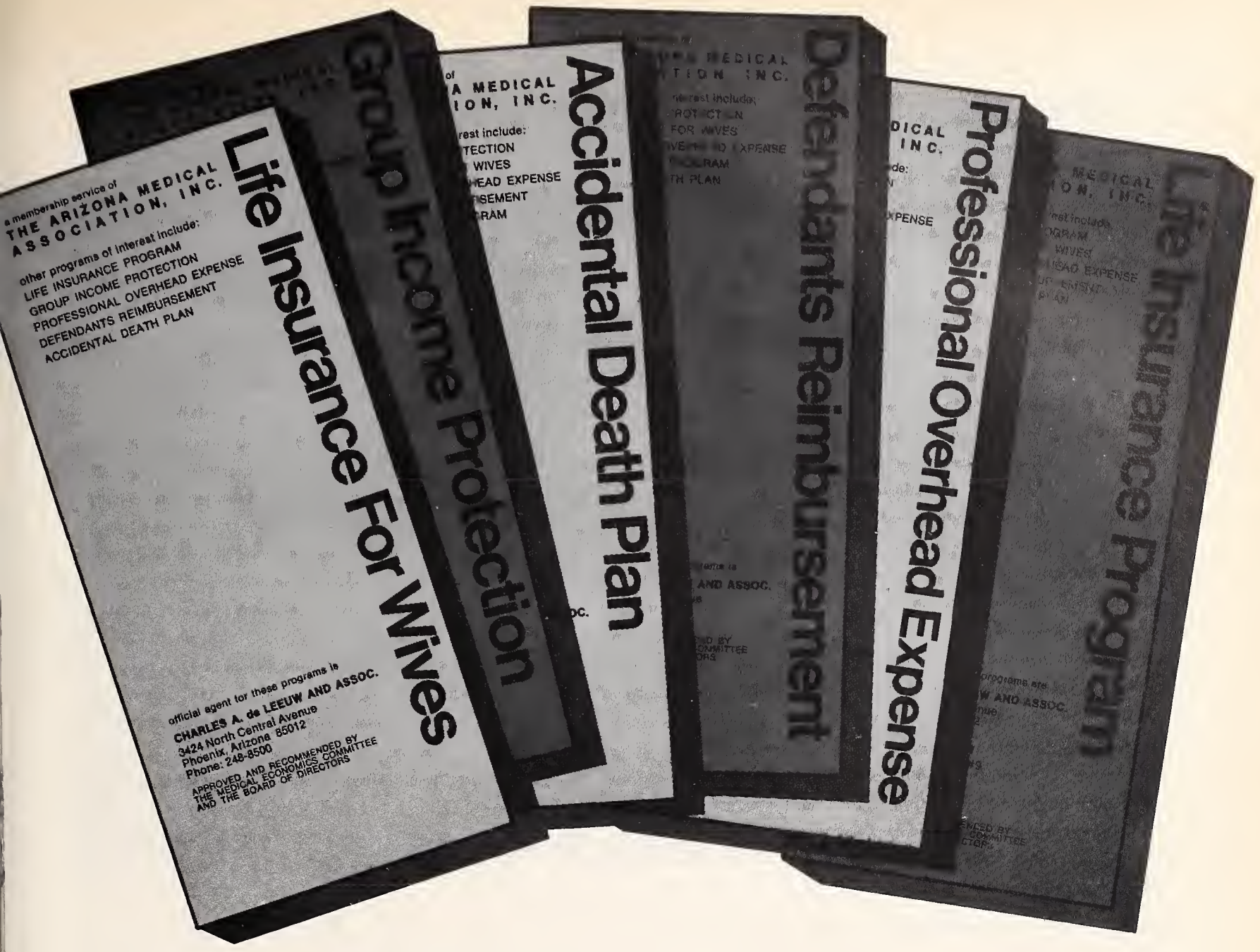
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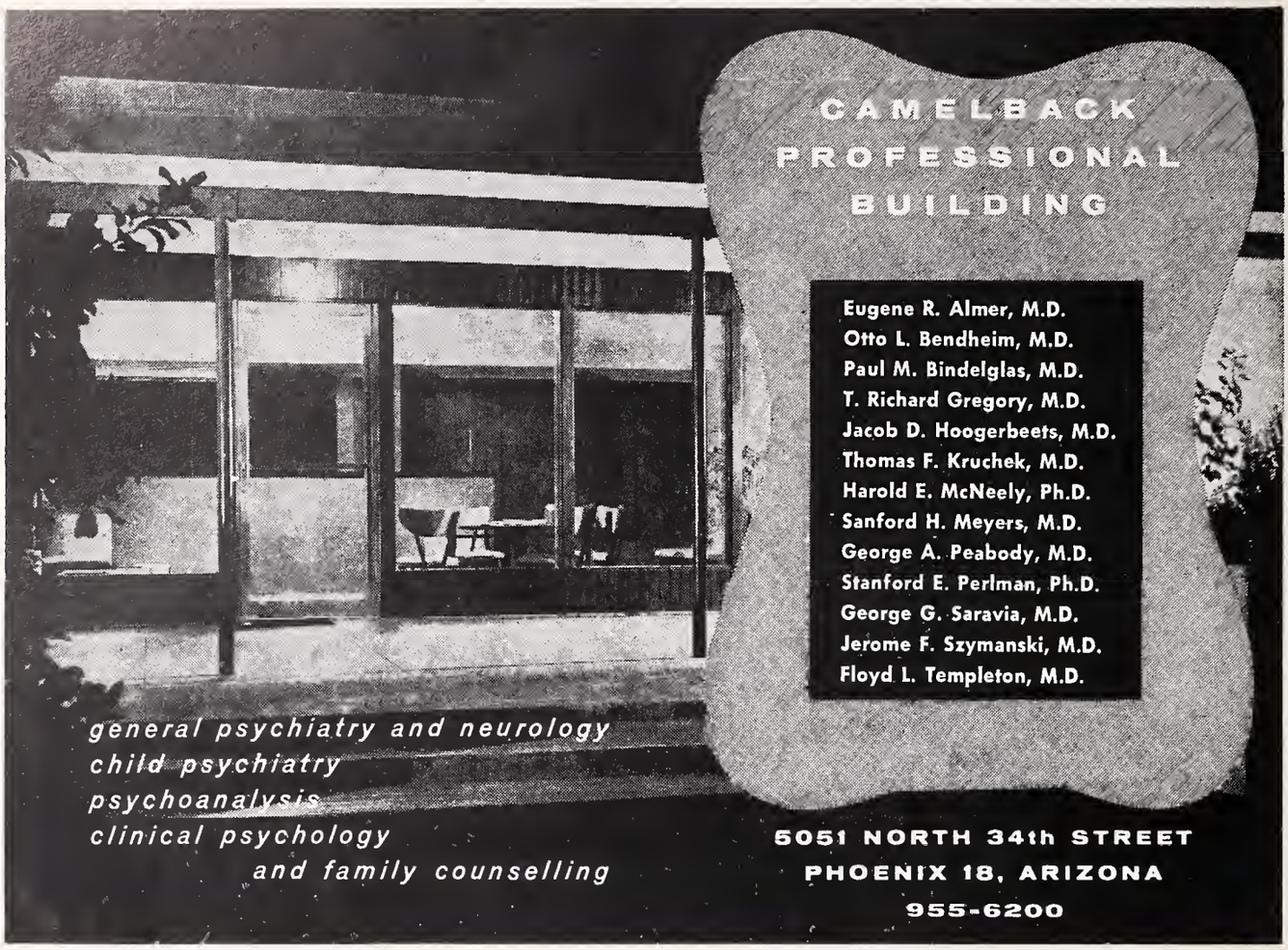
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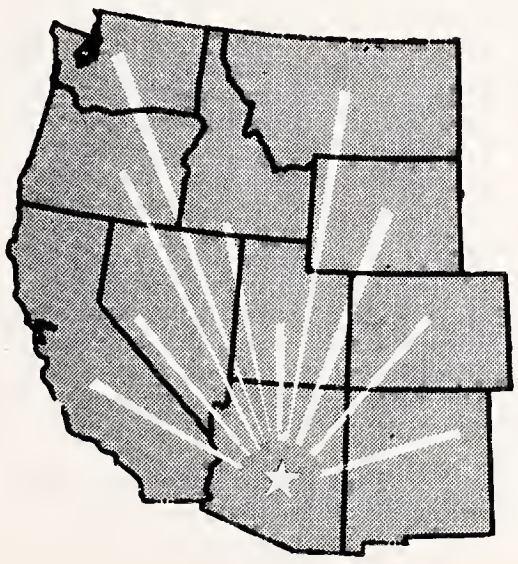


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1973 ANNUAL MEETING

april 24-28, 1973 safari hotel scottsdale

PLAN ON IT

TUESDAY – 4/24 – 1:00 P.M.

HOUSE OF DELEGATES – first session

C. A. Hoffman, M.D., President of the American Medical Association will be the guest speaker.

—– all members welcome ——

followed by the BLUE SHIELD CORPORATE BODY MEETING

WEDNESDAY – 4/25 – 8:00 A.M.

REFERENCE COMMITTEE MEETINGS

all members are urged to attend these meetings and express themselves. this is the place to get your point of view across. all members are welcome.

1:00 P.M.

GOLF AND TENNIS TOURNAMENTS

7:00 P.M.

ANNUAL STEAK FRY – strictly western

THURSDAY – 4/26 – 7:00 A.M. to 5:00 P.M.

NINE PANELS AND WORKSHOPS AND TWENTY SCIENTIFIC PAPERS TO CHOOSE FROM – UCLA AND LOCAL FACULTY

7:00 P.M.

ArMPAC RECEPTION

8:00 P.M.

ArMPAC DINNER

FRIDAY – 4/27 – 7:00 A.M. to 5:00 P.M.

EIGHT PANELS AND WORKSHOPS AND NINETEEN SCIENTIFIC PAPERS TO CHOOSE FROM – UCLA AND LOCAL FACULTY

7:00 P.M.

PRESIDENT'S RECEPTION

8:00 P.M.

PRESIDENT'S BANQUET

Russell B. Roth, M.D., President-Elect of the American Medical Association will be the guest speaker

scientific program approved for 13½ hours credit

SATURDAY – 4/28 – 8:00 A.M.

HOUSE OF DELEGATES – second session

while only delegates can vote at this meeting, all members are welcome to attend

followed by the BLUE SHIELD CORPORATE BODY MEETING

a detailed schedule of the entire program will appear in the march issue of arizona medicine

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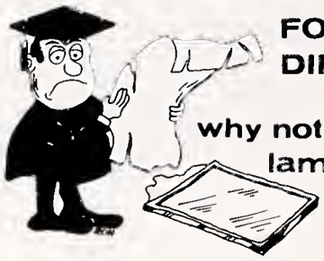
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Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosage. not exceed recommended dosages. Administer caution to patients receiving addicting drugs known to be addiction prone or having a histor drug abuse. The subtherapeutic amount of atro is added to discourage deliberate overdosa strictly observe contraindications, warnings and cautions for atropine; use with caution in chil since signs of atropinism may occur even with recommended dosage.

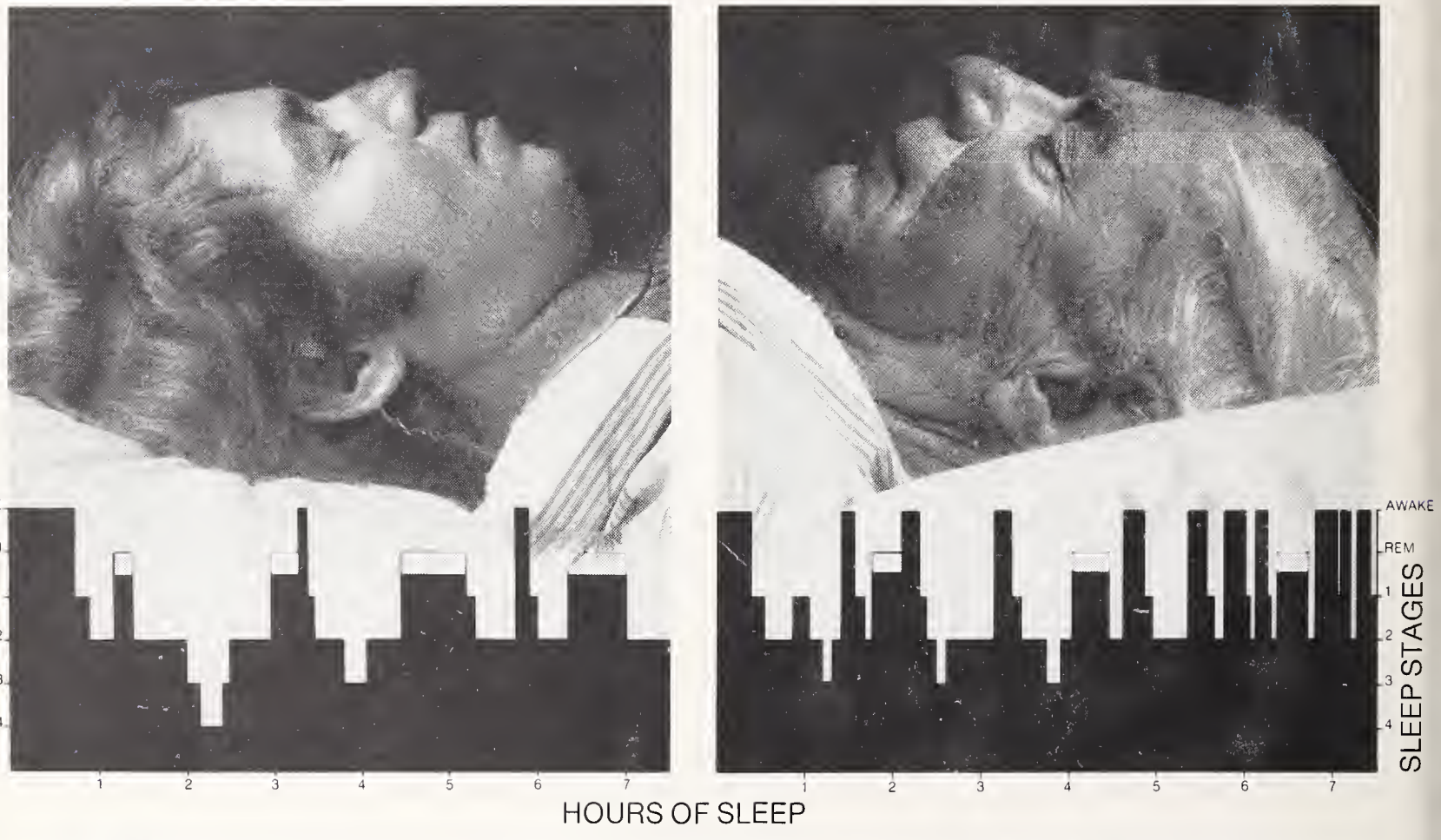
Adverse reactions: Atropine effects include dryn of skin and mucous membranes, flushing and nary retention. Other side effects with Lomotil clude nausea, sedation, vomiting, swelling of gums, abdominal discomfort, respiratory depress numbness of the extremities, headache, dizzin depression, malaise, drowsiness, coma, letha

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Polygraphic measurements at sleep research laboratories demonstrate 5 sleep stages. Stages 1 through 4 are progressive, from lightest to deepest sleep. The fifth stage is REM sleep, characterized by rapid eye movements and linked with dreaming. Typically, a young adult sleeps more deeply and has more REM time than an elderly person. The youthful person also awakes less frequently during the night.

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*The sleep profiles above are artist's representations of abnormal profiles as might be seen in the sleep research laboratory for the insomnia types indicated.

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One 30-mg capsule *h.s.*—usual adult dosage.

For a summary of product information, please see next page.

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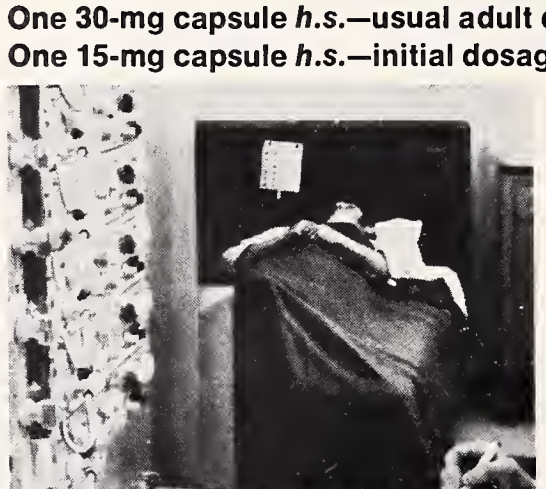
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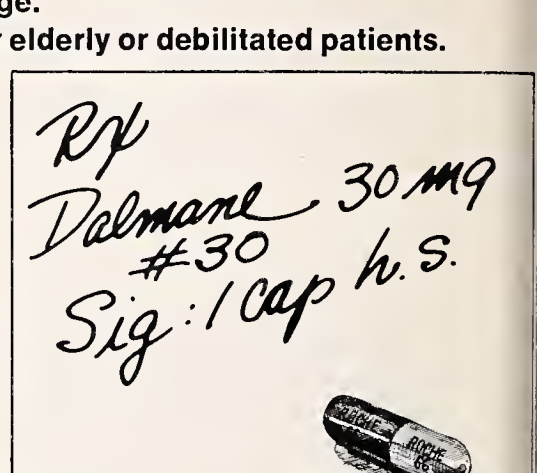
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Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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March, 1973/VOL. 30, NO. 3

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JOURNAL OF ARIZONA MEDICAL ASSOCIATION • MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO

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Published monthly by The Arizona Medical Association, Inc., with offices at 810 W. Bethany Home Rd., Phoenix, Arizona 85013. Subscription $10 a year, single copy $1.00. Second class postage paid at Phoenix, Arizona, and at additional mailing offices.

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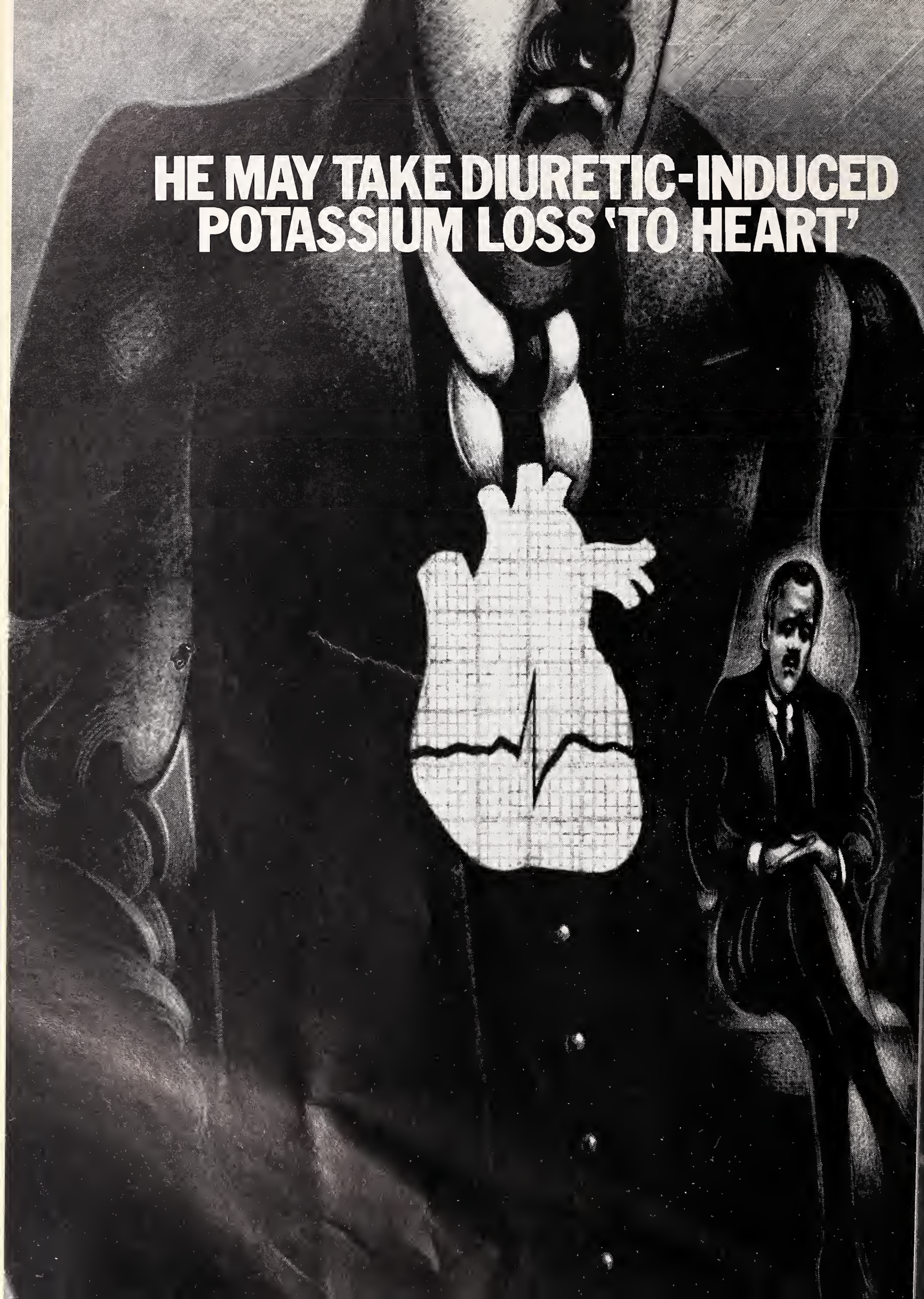
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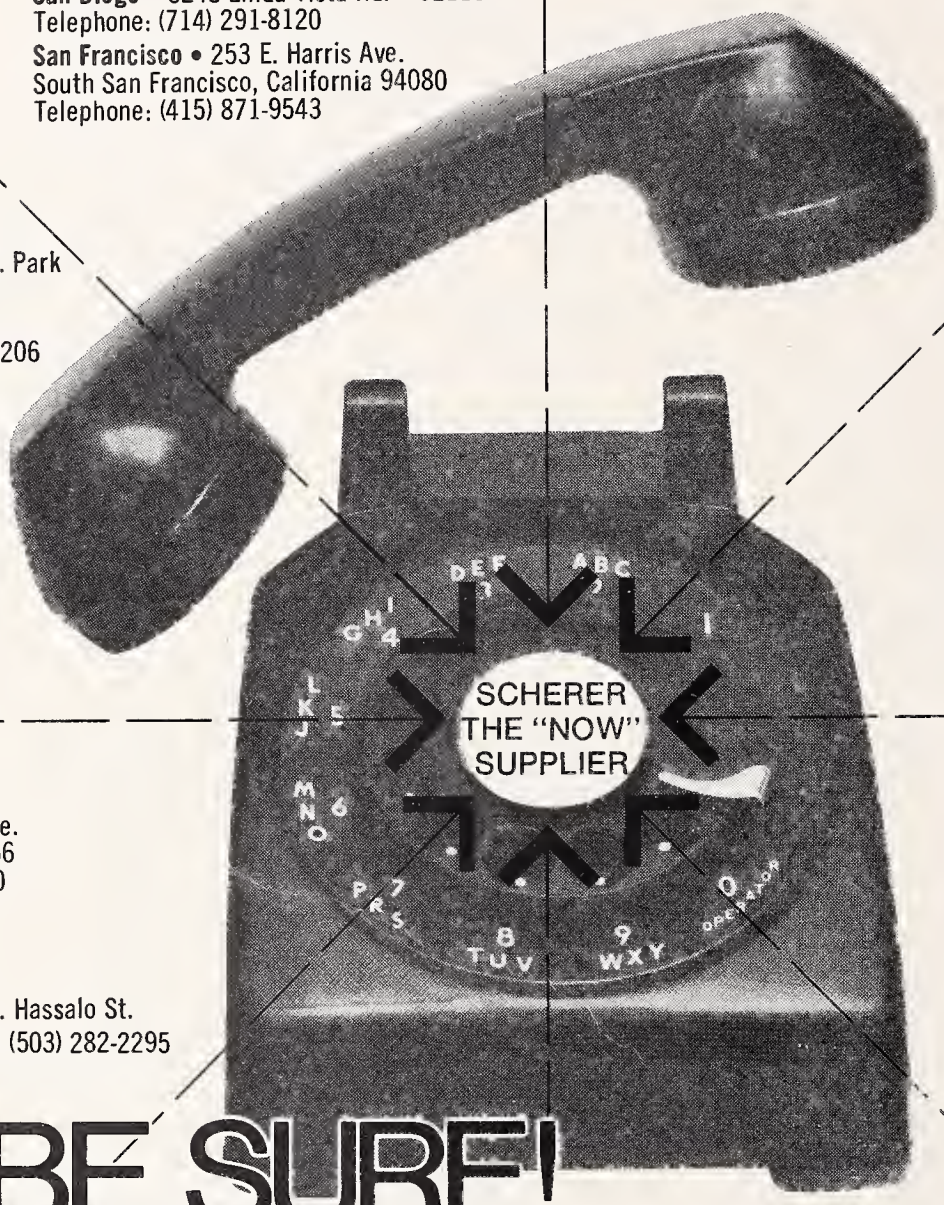
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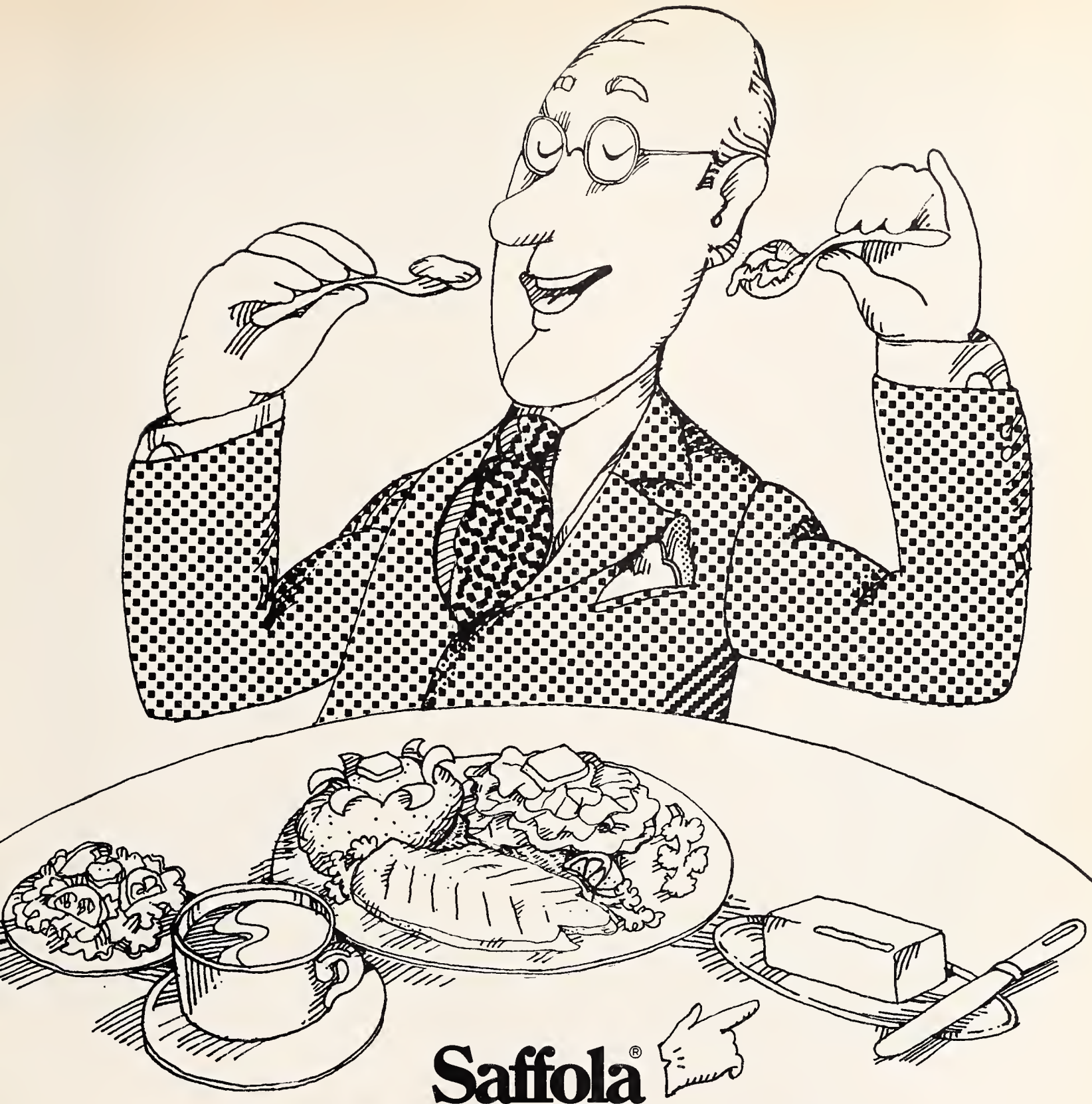
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It's easier for a patient to continue with a low cholesterol diet when you recommend good-tasting Saffola. Saffola foods are made with safflower oil—an exceptionally light and flavorful oil that results in products people readily accept. Safflower oil is also 30% higher in poly-unsaturates than corn oil and lowest of all widely used vegetable oils in saturated fats. Let us send you some useful data to help your patients stay on a low cholesterol diet. Write PVO International Inc., World Trade Center, San Francisco, California 94111.



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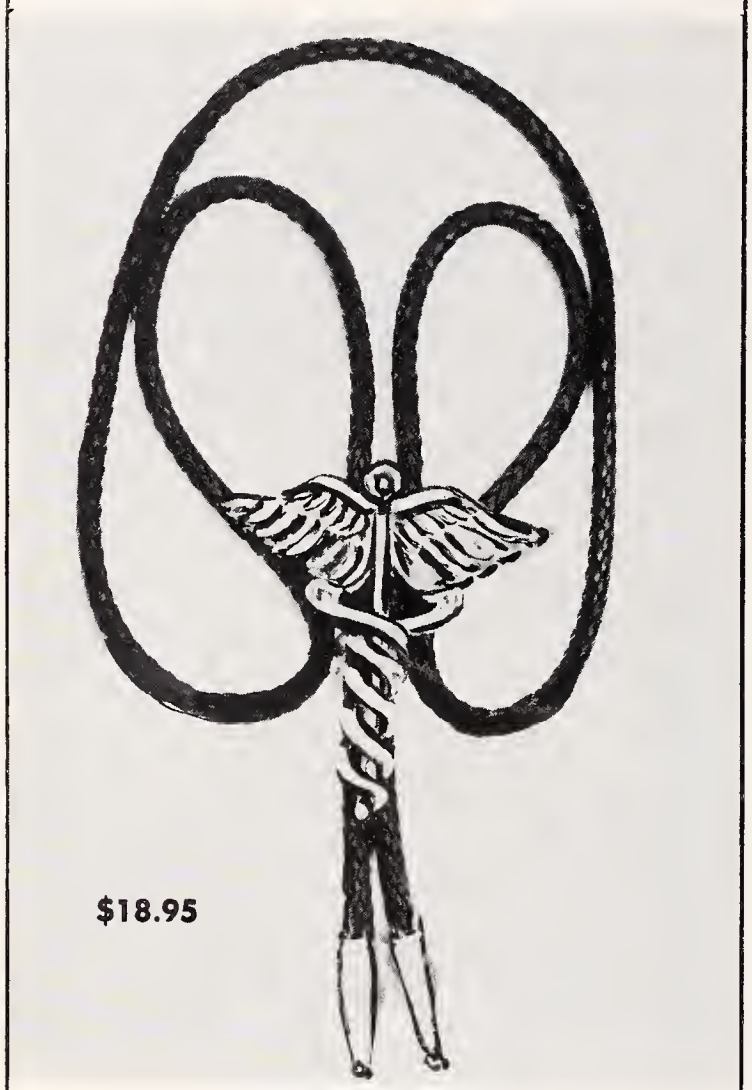
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Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug.The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71

WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

dies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

When irritable colon feels like this

. KINESED® provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distention and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

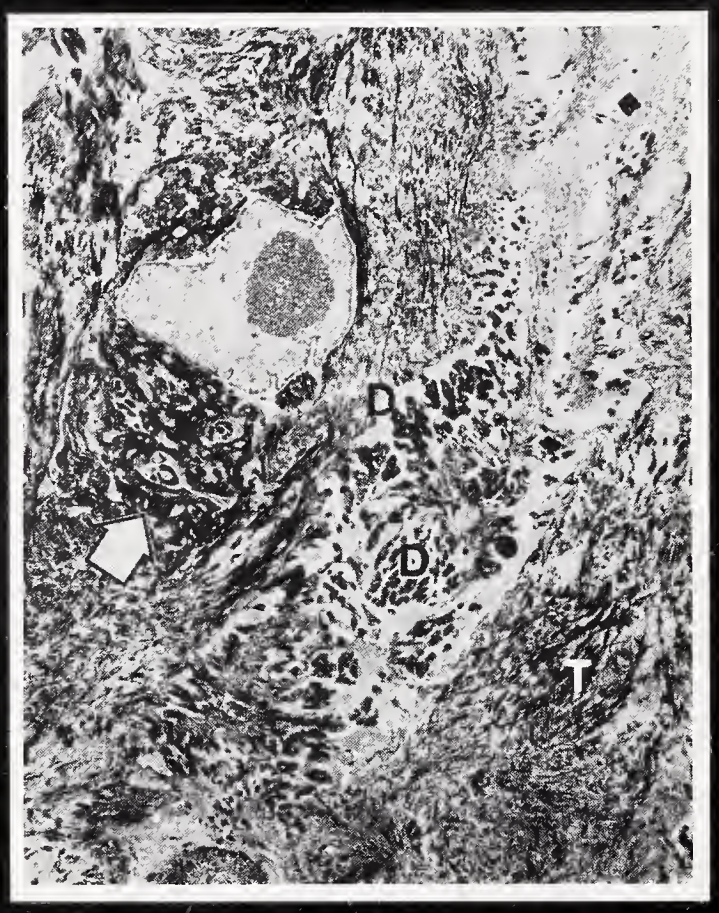
KINESED®

antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

Efudex® (fluorouracil) works where it counts*..



Lesion #2—Two days after initiation of therapy. Electron micrograph of solar keratotic skin from patient's hand.
Typical abnormalities are:
Malpighian cells [containing an abundance of thick tonofibrils (T)] which are connected with well-developed desmosomes (D). Note the clumped tonofibrils in the so-called 'dyskeratotic' cell (arrow) indicative of solar keratosis. No change can be noted at this level after two days of therapy. × 5000 (12/16/71)



Lesion #3—Two weeks after initiation of therapy. Electron micrograph of skin from patient's hand.
Improvement shown:
Less conspicuous desmosomes (D), widened intercellular spaces and Malpighian cells showing a remarkable reduction of tonofibrils (T). The arrow indicates a degenerating dyskeratotic cell. × 5000 (12/31/71)

Solar, actinic or senile keratoses

By whatever name they may be known, they commonly occur as multiple lesions and chiefly on the exposed portions of the skin. Because they may be premalignant, it is generally agreed that they should be treated. Surgery, cryotherapy, or electrodesiccation may present certain drawbacks, both for the physician and the patient, but there is Efudex® (fluorouracil)—as an alternative to conventional therapy.

Sequence of therapy—Selectivity of response

The easily applied Efudex cream or solution usually begins to show effects within a few days—an erythema in the area of the lesions. Within two weeks after initiation of therapy, this reaction usually reaches its height of unsightliness and discomfort, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Acceptable results

Treatment with Efudex (fluorouracil) provides highly acceptable cosmetic results posttherapeutically. The incidence of scarring is low.* This is particularly important with multiple facial lesions. Efudex should be applied with care near the nose, eyes and mouth.

5% cream/solution—a Roche exclusive

Only Roche formulates the 5% cream and solution—high in patient acceptability—economical—and higher in clinical efficacy than the 2% formulation for lesions of the hands and forearms.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

n treating solar keratoses which may be premalignant.



fore treatment—12/14/71



After treatment—Two weeks after therapy stopped—1/28/72

This patient's solar keratoses responded to Efudex (fluorouracil) 5%

ore prescribing, please consult complete product rmation, a summary of which follows:

ications: Multiple actinic or solar keratoses.

ntraindications: Patients with known hypersensitivity to of its components.

rnings: If occlusive dressing used, may increase inflam- tory reactions in adjacent normal skin. Avoid prolonged posure to ultraviolet rays. Safe use in pregnancy not ablished.

cautions: If applied with fingers, wash hands immediately. ply with care near eyes, nose and mouth. Lesions failing espond or recurring should be biopsied.

verse Reactions: Local—pain, pruritus, hyperpigmentation l burning at application site most frequent; also derma- s, scarring, soreness and tenderness. Also reported—in- nnia, stomatitis, suppuration, scaling, swelling, irritability, dicinal taste, photosensitivity, lacrimation, leukocytosis, ombocytopenia, toxic granulation and eosinophilia.

sage and Administration: Apply sufficient quantity to cover ion twice daily with nonmetal applicator or suitable glove. ual duration of therapy is 2 to 4 weeks.

w Supplied: Solution, 10-ml drop dispensers—containing , or 5% fluorouracil on a weight/weight basis, com- unded with propylene glycol, tris(hydroxymethyl)amino- thane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

An alternative to conventional therapy

Efudex®
(fluorouracil) cream/solution



Who knows what evil lurks in the mucous membranes?

Trademark Ornade® knows.

Each Spansule®(brand of sustained release capsule) contains 8 mg. of Teldrin®(brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; and 2.5 mg. of isopropamide, as the iodide.

Knows the public's enemies—nasal congestion, runny nose, sneezing, watery eyes.

Knows what to do about them too.

All through the dark night of upper respiratory difficulty, while ordinary cold remedies wear off, the decongestant, antihistamine, and drying agent in 'Ornade' fight the never-ending battle for comfort, symptomatic relief, and free airways.

Ornade®. Why not let it help fight your patient's cold war.

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

Indications: Upper respiratory congestion and hypersecretion associated with: the common cold; acute and chronic sinusitis; vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F *Smith Kline & French Laboratories*

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

–George Sarton, from "The History of Medicine Versus the History of Art"

Are there significant differences in bioavailability and clinical predictability among drug products?

Opinion

Results of a questionnaire to 7,000 physicians:

44.6%
Agree there is a significant difference

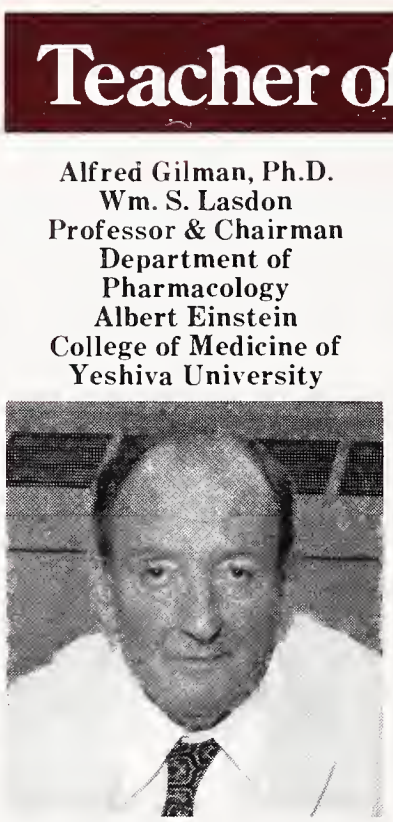
24.9%
Believe there is no difference

30.5%
Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products?

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

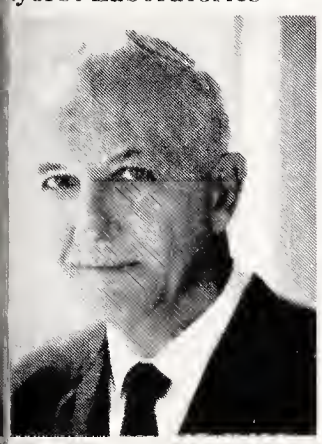
The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictabili More Important Than I

Although the questi price has been greatly aggerated, it is true patients can on occa save money on ger drugs. But you are no ing to dare attempt to money if it jeopardize patient's health. Let' turn to the example has become very promi in recent years, that o cardiac glycosides. are probably the most drugs we use with re to the small differenc tween a maximally effe dose and a toxic dose. W you are dealing with of this type, the first cern must be clinical dictability. At the ri variations in bioavai ity, it would be sheer to try to save the pa what might amou maybe $10 or $20 a The physician cannot age his patient unless sure that the drug prescribing has the positive effect each the prescription is ren This is especially si cant when the patient the product, not for m but for the rest of his

Maker of Medicine

. J. Cavallito, Ph.D.
cutive Vice President
yerst Laboratories



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substance may be de-
by certain physical,
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substances, similar
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manufacturers such
these products are bio-
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uivalent.

Growing Awareness of Potential for Nonequivalence

experience increases
drug substances de-
from different sources
under different condi-
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ablish specifications in
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valence. However,
is general agreement
product therapeutic
valence would still not
sured even if one could minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequivalent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalance have appreciably improved.

Product Selection Based on Patient Response

Improved specifications and standards can better assure the equivalence of *drug substances*. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the *drug product*, not the *drug substance*, that the physician, pharmacist, nurse and patient-customer utilize. How can these individuals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

P·M·A

The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

He won't resist feeling better with Mylanta®

Because the taste is good.

- □ promptly relieves hyperacidity
- □ also relieves fullness and bloating
- □ non-constipating



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Bio-Science Reports

Vitamin B_{12} and Folate Assays:

Why and when

Depletion of Vitamin B_{12} is the paramount feature of pernicious anemia and is a pathogenetic factor in most cases of the megaloblastic syndrome. In true pernicious anemia or following total gastrectomy, the B_{12} deficiency arises from a selective absorption defect caused by the absence of intrinsic factor, a glycoprotein secreted in normal gastric juice. Vitamin B_{12} deficiency may also occur from various other causes, most important of which are the various malabsorption syndromes. Serum levels are a reliable indication of Vitamin B_{12} nutrition when liver disease and myeloproliferative disorders can be ruled out. Hepatocellular damage, especially viral hepatitis, can cause release of Vitamin B_{12}-binding protein into the blood, thus facilitating an increase in Vitamin B_{12} levels.

Serum B_{12} is decreased in:

Pernicious anemia
Malabsorption syndrome
Gastrectomy
Lesions of the small intestine — ileal resection, blind loop, strictures, diverticulosis, anastomosis, regional enteritis
Nutritional vitamin deficiency
Pregnancy
Diphyllobothrium latum infestation

Serum B_{12} is increased in:

Acute and chronic myelogenous leukemia
Polycythemia vera
Myeloid metaplasia
Liver disease — cirrhosis, hepatitis

Megaloblastic anemias of infancy and pregnancy are frequently the result of folate deficiency. Infants with various pathological conditions are predisposed to folate deficiencies. Rapidly growing tissues and intensive hematopoiesis to meet the steadily expanding blood volume increase the demand for folate. Reserves are low even in healthy infants, especially those fed with heated cow's milk. Any infection may produce a clinical deficiency state.

Although some infants with megaloblastic anemia respond to small doses of Vitamin B_{12}, this therapeutic "cross-effectiveness" has not yet been fully explained and treatment with the "wrong" vitamin is potentially dangerous. In megaloblastic anemias cytological examinations cannot establish the specific etiology. Since diagnosis by therapeutic trials is cumbersome, the investigation of serum levels of both compounds is indicated.

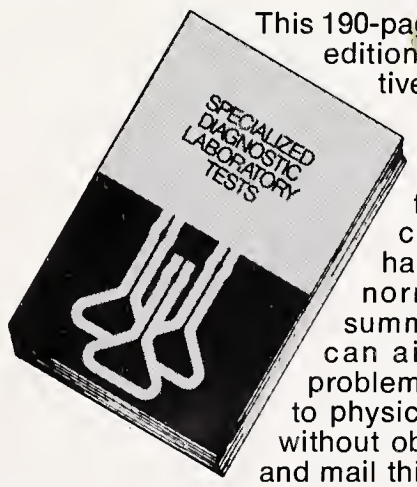
Borderline serum folate levels are difficult to interpret in those patients with little or no hematologic changes. In such cases the measurement of red blood cell (RBC) folate levels (where B_{12} deficiency has been excluded) will provide an accurate quantitative guide to the severity of folate deficiency. When RBC folate is subnormal the indications are a severe depletion of the folate content of both the hemopoietic and liver cells.

Bio-Science Laboratories

Main Lab: 7600 Tyrone Ave., Van Nuys, California 91405
Philadelphia Branch: 116 So. Eighteenth St., Philadelphia, Pa. 19103

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Insights into the ulcer-prone

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*Palmer, E. D.: *Clinical Gastroenterology*, ed. 2, New York, Hoeb Medical Division, Harper & Row, 1963, p. 206.

Captain of Industry



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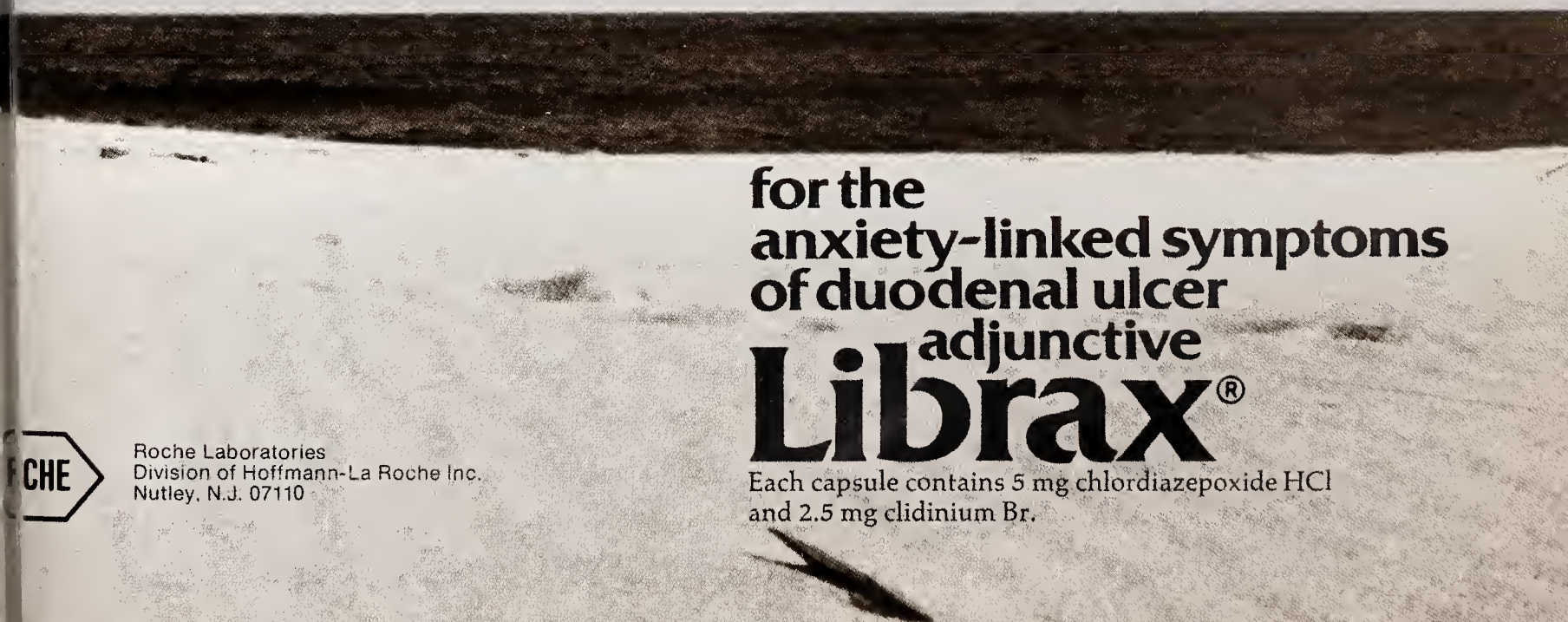
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"Possibly" effective: as adjunctive therapy in peptic ulcer and in the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis, and functional gastrointestinal disorders), especially when accompanied by anxiety or tension.

Final classification of this indication requires further investigation.

CONTRAINDICATIONS: Tridihexethyl chloride: Previous allergic or idiosyncratic reactions to it or related compounds; urinary bladder-neck obstructions (e.g., prostatic obstructions due to hypertrophy); pyloric obstructions because of reduced motility and tonus; organic cardiospasm (megaesophagus); glaucoma; possibly in stenosing gastric or duodenal ulcers with significant gastric retention. **Meprobamate:** Acute intermittent porphyria and allergic or idiosyncratic reactions to meprobamate or related compounds such as carisoprodol, mebutamate, tybamate, carbromal.

WARNINGS: Meprobamate: *Drug Dependence:* Physical and psychological dependence and abuse have occurred. Chronic intoxication, from prolonged use and usually greater than recommended doses, leads to ataxia, slurred speech, vertigo. Carefully supervise dose and amounts prescribed, and avoid prolonged use, especially in alcoholics and addiction-prone persons. Sudden withdrawal after prolonged and excessive use may precipitate recurrence of pre-existing symptoms (e.g., anxiety, anorexia, insomnia) or withdrawal reactions (e.g., vomiting, ataxia, tremors, muscle twitching, confusional states, hallucinosis; rarely convulsive seizures, more likely in persons with CNS damage or pre-existent or latent convulsive disorders). Therefore, reduce dosage gradually (1-2 weeks) or substitute a short-acting barbiturate, then gradually withdraw. *Potentially Hazardous Tasks:* Driving a motor vehicle or operating machinery. *Additive Effects:* Possible additive effects between meprobamate, alcohol, and other CNS depressants or psychotropic drugs. *Pregnancy and Lactation:* Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers, or women of childbearing potential. Animal data at five times the maximum recommended human dose show reduction in litter size due to resorption.

PRECAUTIONS: Tridihexethyl chloride: Use cautiously in elderly males (possible prostatic hypertrophy). **Meprobamate:** To avoid oversedation, use lowest effective dose, particularly in elderly and/or debilitated patients. Consider possibility of suicide attempts; dispense least amount of drug feasible at any one time. To avoid excess accumulation, use caution in patients with compromised liver or kidney function. Meprobamate may precipitate seizures in epileptics.

ADVERSE REACTIONS: Tridihexethyl chloride: Dry mouth (fairly frequent at oral doses of 100 mg), constipation or "bloated" feeling, tachycardia, bradycardia, dilated pupils, increased ocular tension, weakness, nausea, vomiting, headache, drowsiness, urinary hesitancy or retention, dizziness. **Meprobamate:** *Central Nervous System:* Drowsiness, ataxia, dizziness, slurred speech, headache, vertigo, weakness, paresthesias, impairment of visual accommodation, euphoria, overstimulation, paradoxical excitement, fast EEG activity. *Gastrointestinal:* Nausea, vomiting, diarrhea. *Cardiovascular:* Palpitations, tachycardia, various forms of arrhythmia, transient ECG changes, syncope; also hypotensive crises (including one fatal case). *Allergic or Idiosyncratic:* Usually after 1-4 doses. Milder reactions: itchy, urticarial, or erythematous maculopapular rash (generalized or confined to groin). *Other:* leukopenia, acute nonthrombocytopenic purpura, petechiae, ecchymoses, eosinophilia, peripheral edema, adenopathy, fever, fixed drug eruption with cross reaction to carisoprodol, and cross sensitivity between meprobamate/mebutamate and meprobamate/carbromal. More severe, rare hypersensitivity: hyperpyrexia, chills, angioneurotic edema, bronchospasm, oliguria, anuria, anaphylaxis, erythema multiforme, exfoliative dermatitis, stomatitis, proctitis, Stevens-Johnson syndrome, bullous dermatitis (one fatal case after meprobamate plus prednisolone). Stop drug, treat symptomatically (e.g., possible use of epinephrine, antihistamines, and in severe cases corticosteroids). *Hematologic:* Agranulocytosis and aplastic anemia (rarely fatal), but no causal relationship established. Rarely, thrombocytopenic purpura. *Other:* Exacerbation of porphyric symptoms.

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Not for use in children under age 12.

OVERDOSAGE: Tridihexethyl chloride: Acute overdosage can produce dry mouth, difficulty swallowing, marked thirst; blurred vision, photophobia; flushed, hot, dry skin, rash; hyperthermia; palpitations, tachycardia with weak pulse, elevated blood pressure; urinary urgency with difficulty in micturition; abdominal distention; restlessness, confusion, delirium and other signs suggesting acute organic psychosis. Empty stomach after administration of Universal Antidote and treat symptomatically as indicated. **Meprobamate:** Suicidal attempts with meprobamate, alone or with alcohol or other CNS depressants or psychotropic drugs, have produced drowsiness, lethargy, stupor, ataxia, coma, shock, vasomotor and respiratory collapse, and death. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Meprobamate is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

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* **Indication:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: For the treatment of vulvovaginal candidiasis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

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Original Articles

THE TIME OF DEATH



ROBERT J. JOLING, J.D.

Recent scientific advances, especially those concerned with homotransplantation have raised serious medical, legal, ethical, and theologic questions related to the exact time of death and the parameters by which it should be measured. The author explores the medical-legal background of this problem and details the current applications of the law in the courts. Recommendations are made for a cooperative professional effort to resolve the "Time of Death" question.

From 1964 through 1969, many members of the legal and medical profession debated, spoke, and wrote about the medico-legal problems involved in homotransplantation. This was before the advent of the Uniform Anatomical Gift Act; before a single statute relating to the time of death has passed a legislative body; and before a single legal decision had been rendered.

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Prior to 1968, approximately 38 articles relating to ethical and legal aspects of homotransplantation, had been written by 35 authors. Many of these articles dealt with specific types of transplantation and techniques used. Some specifically referred to ethical problems of experimental medicine. A mere half-dozen were addressed to the medico-legal problems involved. Yet, by 1969, the National Institute of Health, The American Medical Association, The Veterans Administration, The American Bar Association and other public and private agencies were urging the adoption of the Uniform Anatomical Gift Act. The writings of Blair,[1] Sabattani,[2] Revillard,[3] Lodovici,[4] and Wasmith,[5] together with the lectures given by innummerable interested physicians and lawyers were about to reach fruition. In 1970, the Uniform Anatomical Gift Act became a reality. Today, the majority of the several States have readopted the following general criteria, with some variation, in their respective legislation:

1. Any person 18 years of age or older, and of sound mind, may give all or part of his body for any medical research or transplantation procedure.

2. The right of a person to dispose of his body, or any part thereof, cannot be overturned by the next of kin, but can be revoked during the lifetime of the individual by himself.

3. If a person has not given his body or organs to a legally defined recipient during his lifetime, his next of kin may do so. However, this can be done only in the instance where the

decedent has not actually given contraindicative notice, or where there is no opposition by a kinship standing in the same blood relationship to the decedent as the person desiring to make the donation.

4. The donee, institution, or medical doctor accepting such anatomical gift in good faith, relying on documentation, is protected from being sued.

5. Medical doctors receiving such anatomical donations for transplantation may not certify the decedent's death. Certification of death must be done by the physician who tends the donor at death or by a physician who certifies the death in the absence of an attending physician. However, in any event the physician certifying the death of the decedent shall not be allowed to participate in any procedure for the removing or transplanting a part of decedent's body.

Arizona adopted such legislation in 1970.[6]

Even though most states have defined the methods for donating a body, or parts thereof, only one state has adopted a statutory definition of death. This state is Kansas.[7]

It should be mentioned that the Common Law, passed down from 17th century legal decisions, did not recognize the body as property. Therefore, until the enactment of the Uniform Anatomical Gift Act a body could not be transferred to anyone, and it simply passed into the hands of the next of kin for the purposes of burial. All states, including Arizona,[8] still have such statutes relating to responsibility for burial.

The foregoing gives rise to the question of medical and legal portent, when is a person dead?

Several years ago, guidelines to aid in determining death were drafted by a special committee at the University of Wisconsin Medical School, led by Dr. O. O. Meyer. The chief guideline required that two physicians, not otherwise involved with the decedent, would determine the presence of death. The five critria for this determination of "cerebral" death, even though there might still be present a heartbeat and relatively normal blood pressure, are as follows:

1. Unconsciousness and total lack of response to normally intensely painful stimuli.

2. Lack of spontaneous movement for at least one hour.

3. Lack of reflexes involving cranial nerves.

4. A total flat brain wave recording when twice the normal machine power is on, and no brain wave responses to sensory stimuli.

5. Lack of spontaneous breathing.

In addition, this report required that all five criteria would have to persist unchanged for a period of at least 24 hours in most brain death cases. Such guidelines have also been reported in other journals.[9]

It should be noted that criteria four, above, requires "a total flat brain wave recording when twice the normal machine power is on . . ." This was a 1968 criterion. In 1969, Dr. Hadassah Gillon[10] reported that there should be one additional criterion, the nonconsumption of oxygen by the brain. This theory was first advanced by Dr. Mordechai Shalit of Hadassah Hospital, Israel. It is based on two very interesting cases. The first involved a 15 year old boy who sustained severe brain injury upon falling into a cave. The boy was dead according to the five criteria of death established in 1968 by the Council for International Organization of Medical Science. For two weeks the neurosurgeons at Hadassah Hospital kept the lad on drugs and artificial respiration despite a flat electroencephalogram. At the end of two weeks there was a change. The electroencephalogram began to indicate "new" activity in the boy's brain. Subsequently, spontaneous respiration was attained. Thereafter it was reported that this young boy had a normal EEG, and that he was mentally and physically in excellent condition within two months of the date of the accident.

The second case[11] involved a 14 year old girl whose head was wounded by a shell fragment during the 1967 Arab-Israeli War. On admission to Hadassah Hospital she was deeply comatose, requiring an operation for a fractured skull and subdural hemorrage. There was spontaneous respiration and blood pressure, although she remained deeply comatose with wide pupils and no response to stimuli. The electroencephalogram recording on the second day of hospitalization was flat. However, within one week from the day of the injury the EEG reading was normal. The young girl thereafter was reported to be in good condition.

The brain is the singular organ in the body most sensitive to the lack of oxygen. The Hadassah Hospital surgeons theorize; therefore,

that if the brain is alive, regardless of a flat EEG or not, it will still consume oxygen. Using a well established test for oxygen brain consumption, the involved surgical team administered nitrous oxide gas. The degree of clearance of this gas through the brain, it is reported, gives an index of blood flow. Thus the amount of brain tissue being perfused can be determined. The surgical team then placed catheters high in the internal carotid artery and the jugular vein. Oxygen level was measured in both arterial and venous blood. When a difference between the two levels existed, the Hadassah Hospital surgeons concluded, some part of the brain is metabolizing, and the patient has some chance of recovery.[12]

Dr. Shalit, the head of the Hadassah Hospital surgical team has stated:[13]

> "Our test has one great advantage. It enables us to look into the brain of the comatose patient and see what is going on . . . For the vast majority of people dying in a hospital, the question of death poses no problem. But in almost all these cases, the deceased cannot be used for transplants because his organs have suffered. In the case of brain injuries, where transplants are possible, we need some parameter to measure the irreversible downward curve of the nervous system to death. We think that measuring the oxygen consumption of the brain may provide the answer."

In spite of all the debate involving the determination of the time of death, no legal decisions appeared until 1972. Prior to this time, the Courts throughout the United States steadfastly maintained that the question of determining the time of death remained the legal system's right and not the medical profession's right. The usual "legal" definition to determine time of death is set forth in the 1968, 4th edition of Black's Law Dictionary[14] defines death as:

> "The cessation of life; the ceasing to exist; defined by physicians as the total stoppage of the circulation of the blood, and a cessation of the animal and vital functions consequent thereon, such as respiration, pulsation, etc."

This definition is also found in Black's Law Dictionary, 4th edition, 1951, and the third edition issued in 1933. This "legal" definition has remained stable for a period of no less than 39 years. Recently it was the applied criterion in a case stemming from a heart transplant operation in 1968 at the Medical College of Virginia. This case reached the trial stage in May of 1972,[15] and was tried before a jury and Judge A. Christian Compton of the Richmond Law and Equity Court.

The first issue in this case was whether the decedent was in fact dead when his heart was removed. Stated differently, is a person dead when his brain apparently has ceased to function, or is he dead when all of his bodily functions have halted?

The second issue of importance concerned whether a legal or a medical judgment is involved in determining the time of death.

It is interesting to note that in the instant case Judge Compton determined the legal concept would be applied and not a medical concept of neurological death in establishing the rule of law. Thus, Black's Law Dictionary definition of death was to be used as the rule of law.

However, a reading of Black's Law Dictionary definition clearly indicates that the definition adopted by Black is attributable to the medical profession.

Dorland's Illustrated Medical Dictionary[16] of 1960 defined death as:

> "The apparent extinction of life as manifested by the absence of heartbeat and respiration."

The 1968 edition of Black's Law Dictionary and the 1960 Dorland's Illustrated Medical Dictionary are compatible in defining death. Therefore, at the time the courts first adopted the definition of death, and subsequently applied it in the case involving the Medical College of Virginia, the prevailing dictionary definition may well have reflected with reasonable accuracy the prevailing medical opinion buried within the existing legal decisions.

Legal decisions abound involving questions of inheritance and insurance proceeds where the courts have had to decide which of two people died first when their deaths appeared to have occurred contemporaneously. In these instances, the courts have generally applied the "Black-Dorland" definitions. Thus, it is not surprising that Judge Compton in the Medical College of Virginia case stated:[17]

> ". . . to employ different standards in this field (heart transplantation) would create

chaos in other fields of the law and certainly it cannot be successfully argued that there should be one concept of death which applies to one type of litigation while an entirely different standard applies in other areas." (Parenthesis added)

It is interesting to note that the Virginia jury rejected this malpractice suit based on the claim that the decedent heart donor was still alive at the time of the transplant because his pulse and respiration were artificially maintained. Thus, the jury at least relied on the medical determination of "cerebral death" rather than on the then eixstent legal definition of death. This is a lower court case of first impression. Whenever an appellate court renders a decision involving the pertinent question, the initial stage will be set for further appeal to the U.S. District Court, and the U. S. Circuit Court of Appeals, and eventually to the Supreme Court of the United States. Should this case in Virginia not reach the federal judicial appeal stage, nor reach the Supreme Court of the United States, it can be assumed that another will.

The question of the time of death, however, is not exclusively within the realm of medico-legal concern. Today, philosophers, theologians, moralists — in fact, almost everyone is concerned with the question, "When is a person dead?" In spite of what has occurred within the field of medicine and in spite of continuous and extensive medical and legal literary discourse, we have not yet arrived at a legal definition of death based on 20th century medical facts, save the singular statutory attempt in the state of Kansas. Thus, to hasten the death of a person whose demise, through sickness or injury is inevitable, remains homicide in law.

Historically, the law has been the expressed will of the electorate through its representatives. In this sense, the law has reflected the moral conscience of society. Therefore, the moralist, the metaphysicist, the theologian, and the philosopher has a stake in redefining the occurrence or time of death.

Being finite creatures, we do not understand the infinite — and we never shall. Yet, we must live within certain rules as proscribed by society; and if society is to be moralistic — then, we must live by the laws which govern it, one of which states: "Thou shalt not Kill."[18]

It would appear that moral questions based on one's own philosophical, metaphysical, or theological beliefs will necessarily give way, in a land governed by laws, to the overall will of the enlightened society as expressed through its elected representatives and the statutes enacted. These concepts must be understood, appreciated, and considered when an acceptable definition of death is finally adopted into law. To this end, both professions of medicine and law must gear their future endeavors. In doing so each profession must educate the other as well as the general populace.

Clinical death, cerebral death, biological death, medical death, legal death, are all words used to describe particular and meaningful events relating to the finality of the existence of a human being. "Legal death" has already been defined by Black, supra. "Medical death" is that which arrives at the time the tissues in the body cease to function. "Cerebral death" is based on the irreversible coma criteria[19] based on the fact that when respiration is maintained only by artificial means and then is withdrawn, spontaneous respiration is impossible. "Clinical death" occurs at the ceasing of spontaneous respiration when the heart has stopped beating.

Problems arise, however, by reason of present medical advances. Today, aecording to Dr. Richard J. Lescoe of Los Angeles, California, it is possible with modern and sophisticated equipment and techniques to keep a patient breathing and his heart beating even though he is in a deep and irreversible coma.[20]

It is interesting to note that in the past a few of the more common criteria upon which a diagnosis of death was postulated included the following:[21]

a. Presence of rigor mortis, or shortening and thickening of muscles, chiefly the flexor and abductor muscles of the extremities and elevators of the lower jaw.

b. Absence of blood pressure.

c. Cyanotic appearance of lips and fingertips.

d. Lack of bleeding of small distal artery.

e. Dull, glazed, lusterless appearance of eyeball with irregular iris.

f. Absence of ripple in saucer of water or mercury placed on ehest or abdomen.

g. Putrefaction of decomposition.

h. Fall of body temperature to that of environment.

It would appear that today's scientific knowledge would lead to the conclusion that legally and medically, we should distinguish between "being alive" and a "live state of being" that can be maintained artificially. In other words, it would appear that there is a living state in the tissues of the body, and there is being alive.

The process of death must be better understood by all of us. No one simply "ups and dies." A person dies in stages. First, it might be said that clinical or medical death occurs, at which time circulation and spontaneous respiration ceases. Then biological death occurs, or a permanent extinction of life which quickly follows clinical or medical death unless reanimation procedures are started. If reanimation procedures are started, the brain may be stimulated to function for at least a period of a short time. However, at this point the patient is immobile, with atonic muscles. There are no reflexes, and no reaction to pain will be noted. All vegetative regulations, such as body temperature, cease. Only the heart continues to function. An electroencephalographic tracing will appear flat. Medically speaking this would justify the conclusion that cerebral death has occurred, and that the central nervous system is dead.

The brain controls all of the voluntary actions of man. The heart involuntarily supplies the energy-producing necessities. Thus, even though there may be a flat EEG and the brain is cerebrally dead, by stimulation the heart may yet continue to pump. However, scientifically the brain has died and this should justify declaring the person dead. This is true even though artificially sustained cardiopulmonary function continues. The irreversible cessation of brain activity is death. However, there is difficulty in deciding how long an EEG tracing must show no sign of brain activity before it can be said that the brain has ceased to function on a permanent basis. An argument still goes on within medical science whether it is one minute, three to five minutes, or longer.

Professor Jean Hamburgur of Paris has cited two patients[22] who recovered from barbiturate coma after a "flat EEG for several hours." Despite this difficulty, the French Academy of Science has stated that a person should be declared legally dead when his brain has ceased to function, even though other organs may be kept alive by artificial means.

There are many purposes for which the determination of the moment of death is of considerable importance. The moment of death is of importance in the detection of crime. The financial interests of the surviving relatives, and others, may be considerably affected by the ascertainment of the moment of death unless legislation is changed to cope with these problems.

From the foregoing, it appears legal implications are present only because the laws now existent have not been updated to cope with the now available medico-scientific data. The existing laws together with the decisions based thereon were written when modern medical science, forensic medicine, and biochemical processes were unknown.

A review of the historical evolution of legal and medical concepts of death should lead to the conclusion that the medico-legal concept of death must be determined by the medical profession. It alone is qualified to determine a proper medical diagnosis of death. However, since we are a nation of laws, there must be a medico-legal definition which is acceptable to the state and the public for the protection of the public as well as for the protection of those practicing medicine. There is a definite need for conferences between medico-legal specialists, elected state representatives, theological representatives, and other authorities to acquire a consolidated publicly acceptable opinion as to a definition of death.

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ELECTROCARDIOGRAPHIC PRECURSORS OF COMPLETE HEART BLOCK

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SUMMARY

The most common cause of complete heart block is progressive fibrosis of the bundle branches of the ventricular conduction system. Conduction disturbances of the "three fascicles" of the ventricular conduction system are cause for concern and should lead to definitive diagnostic studies so that appropriate therapy can be initiated. In the absence of second or third degree heart block, the diagnosis of "trifascicular block" can only be suspected from a single electrocardiogram. This article emphasized the importance of serial electrocardiographic changes in making this diagnosis. It also illustrates the types of QRS abnormalities that, when present, should make one consider impending complete heart block. Finally, the electrocardiographic indications for definitive studies such as His bundle recording and atrial pacing are outlined.

INTRODUCTION

The medical profession's concept of heart block has changed significantly during the past two decades. The two findings responsible for the change have been the discovery that heart block commonly occurs below the region of the AV node, and Rosenbaum's demonstration that the left bundle branch is usually composed of two major branches or fascicles.

Rosenbaum,[1] Lepeschkin[2] and Lenegre[3] have confirmed observations by Mahaim and others[4, 5] that complete heart block is commonly caused by fibrotic degeneration of the bundle branches.

Although heart block can and does occur in the region of the AV node, the most common cause of complete heart block is fibrotic degeneration of the bundle branches. The clinical importance of these findings lies in the fact that this fibrotic process does not occur overnight. Intermediate stages cause alteration in the QRS complex of the electrocardiogram that can readily be recognized. Therefore, patients at risk of developing complete heart block, can be identified.

Anatomic studies[6-9] have suggested that the ventricular conduction system has three fascicles, each responsible for activation of well delineated areas of the ventricle. The *right bundle branch* (RB) activates the right ventricle, the *anterior-superior ramifications* of the left bundle (LAS) activate the anterolateral surface of the left ventricle, and the *posterior-inferior ramifications* of the left bundle (LPI) activate the posterior and diaphragmatic areas of the left ventricle.[6, 10-13]

There is controversy concerning the precise anatomic make-up of the left bundle branch; authorities are not convinced that it divides into a distinct anterior-superior fascicle and a distinct posterior-inferior fascicle. There may well be interconnecting branches or intermediate branches. However, from a functional, or electrocardiographic standpoint, the concept of a trifascicular ventricular conducting system appears to be valid and clinically is a very useful concept. Therefore, we have schematically represented the ventricular conducting system after that proposed by Rosenbaum. Finally, the terminology is variable. Block of the left anterior-superior (LAS) fascicle is also called left anterior hemiblock, and block of the left posterior-inferior (LPI) fascicle is also called left posterior hemiblock.[6, 14] In this paper "block" is used to indicate the spectrum of conduction delays up to and including non-transmission or complete block.

In the absence of congenital heart disease, block of any one of the three fascicles can be detected by the electrocardiogram as follows: 1) advanced block of the right bundle branch produces the characteristic electrocardiographic changes of right bundle branch block (an rr' in lead V_1): 2) advanced block of the left anterior-superior fascicle of the left bundle branch produces left axis deviation greater than minus 45° (Fig. 1 A): 3) advanced block of the left posterior-inferior division of the left bundle branch produces right axis deviation greater than +120 (Fig. 1C).

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To be sure of the latter diagnosis, one must exclude right ventricular hypertrophy.[14] Pre-divisional left bundle branch block can also occur, and results in classical left branch block without axis deviation.[14] As illustrated in the right panel of Figure 1, the presence or absence of right bundle branch block does not significantly alter the frontal plane axis.

Block of a fascicle is not always complete. Conduction through a fascicle may be abnormally slow; the term incomplete block is used to describe this phenomenon. Incomplete or complete block may occur in one, any combination of two, or in varying degrees in all three fascicles. Because of the progressive nature of fibrotic degeneration, conduction delays through all three fascicles can best be recognized by noting *sequential* changes in serial electrocardiograms.

Some of the sequential changes suggesting trifascicular block are demonstrated in the electrocardiograms of three patients herein reported. These examples will illustrate different forms of the progressive development of trifascicular block.

The first two cases illustrate the most common type of "trifascicular block."[6] Block in these two patients (Figs. 2, 3) evolved from right bundle branch block with left axis deviation to right bundle branch block with right axis deviation and first degree heart block. This pattern indicates block or conduction delays of the right bundle and of the left anterior-superior fascicle (Fig. 2 A), followed subsequently by the development of conduction delay in the left posterior-inferior fascicle greater than that in the LAS. Therefore activation of the ventricles now occurs via the LAS fascicle. Note that even though conduction through this fascicle is abnormally slow, (accounting for the prolonged PR interval) the fascicle is still capable of activating the ventricles. When the LPI was functioning normally (Fig. 2 A) activation of the ventricles occurs via this fascicle before the delayed impulse from the LAS could be effective.

The diagnosis of "bifascicular block" (block of RB and LPI) can easily be made on the second tracing (Fig. 2 B). If, however, the physician had only this electrocardiogram taken in 1969, he would not know whether the prolonged PR interval was due to an associated conduction delay in the anterior-superior fascicle of the left bundle branch, or in the region of the AV node. One can only be sure by intracardiac His bundle recordings.[15] However, the sequential changes in the patient's electrocardiogram from 1951 to 1969 strongly suggest "trifascicular block" and not "bifascicular block" with associated conduction delay at the level of the AV node. The patient had syncopal attacks in 1969 but has been asymptomatic during the three years since implantation of a permanent demand cardiac pacemaker. Sequential electrocardiographic changes of patient S.R. (Fig. 3) are similar to those of the first patient. However, the association of large Q waves suggests that ischemic heart disease may have contributed to the damaged conduction system.

A different type of progression is illustrated in the third patient's serial electrocardiograms illustrated in figures 4 and 5. This patient (P.R.) started in 1954 with borderline left axis deviation in an otherwise normal electrocardiogram (Fig. 4 A). In 1957, the electrocardiogram showed definite left axis deviation (Fig. 4 B). Right bundle branch block, left axis deviation and first degree heart block were present in 1966 (Fig. 5 A). In 1969, (Fig. 5 B), he exhibited left bundle branch block with further prolongation of PR interval. As depicted by the diagrams accompanying the ECG, this sequence suggests progressive involvement of the left anterior-superior fascicle (Fig. 4), followed by involvement of the right bundle branch (Fig. 5). As the disease progressed Fig. 5 B), the block of the two fascicles of the left bundle branch is greater than that of the right bundle, and the ventricles are activated via the right bundle branch. From the electrocardiogram taken in 1969 (Fig. 5 B), one could not tell whether this ECG pattern represented LBBB with associated first degree heart block due to conduction delay at the AV node or trifascicular block. The sequential changes in the electrocardiograms from 1954 to 1969 strongly suggest the latter. This patient subsequently developed Mobitz-type II second degree heart block which almost certainly indicated block distal to the AV node.

The sequential electrocardiographic changes of these patients also illustrate the point that "block" of the fascicles is often a relative phenomenon and may only mean that conduction through one fascicle is delayed so that the ventricles are activated via the other fascicles. Subsequent tracings may show that the previously "blocked" bundle is the only remaining part capable of conducting.

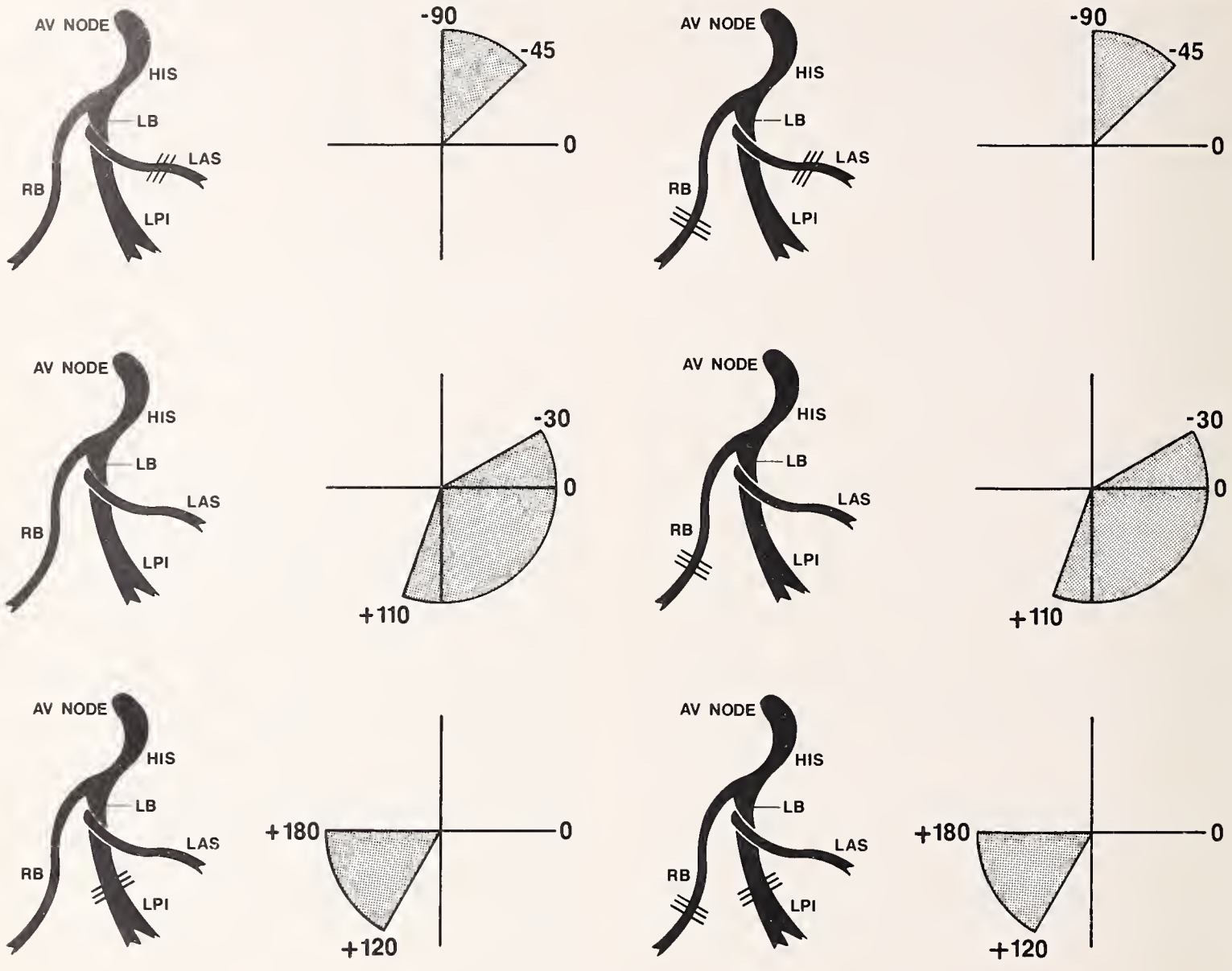


Figure 1.
Schematic representation of the "trifascicular" conducting system and the resultant frontal plane axis. Single or double cross-bars indicate increasing degrees of conduction delay. Three cross-bars indicate complete block. A) Block of the left anterior-superior fascicle resulting in marked left axis deviation. B) Normal conduction. C) Block of the left posterior-inferior fascicle resulting in marked right axis deviation. D,E,F) Note that the associated block of the right bundle branch does not significantly alter the frontal plane axis.

Precursors of Complete Heart Block

The various QRS configurations which suggest impending complete heart block are illustrated in Figure 6. It must be emphasized that the presence of any one of these configurations only *suggests* involvement of all of the ramifications of the ventricular system. These QRS deformities are produced by delayed conduction through two of the "three fascicles" of the ventricular conduction system. The involvement of the third can be inferred from either (1) associated history of syncope, (2) observation of sequential changes in the electrocardiogram that indicate previous conduction delay through the third fascicle, or (3) a prolonged "His-Purkinje" interval recorded by intracardiac His bundle recordings.[15]

When should a patient with abnormal QRS complexes be referred for more definitive evaluations such as intracardiac His bundle recordings and atrial pacing studies? Our approach is as follows: (1) any patient with a history of syncope and electrocardiographic evidence of "bifascicular block" as illustrated in Figure 6, (2) any patient who develops evidence of "bifascicular block" during an acute myocardial infarction, or (3) any patient whose sequential electrocardiograms indicate previous involvement of the "third fascicle" (Figs. 1-4).

Relative indications for investigation are the presence of first degree heart block in association with the QRS configurations illustrated in Figure 6. If this pattern represents involvement of all "three fascicles" there is cause for concern, yet many patients with "bifascicular block" and associated first degree heart block do well for years. Digitalis and propranolol can cause conduction delay at the AV node. These drugs

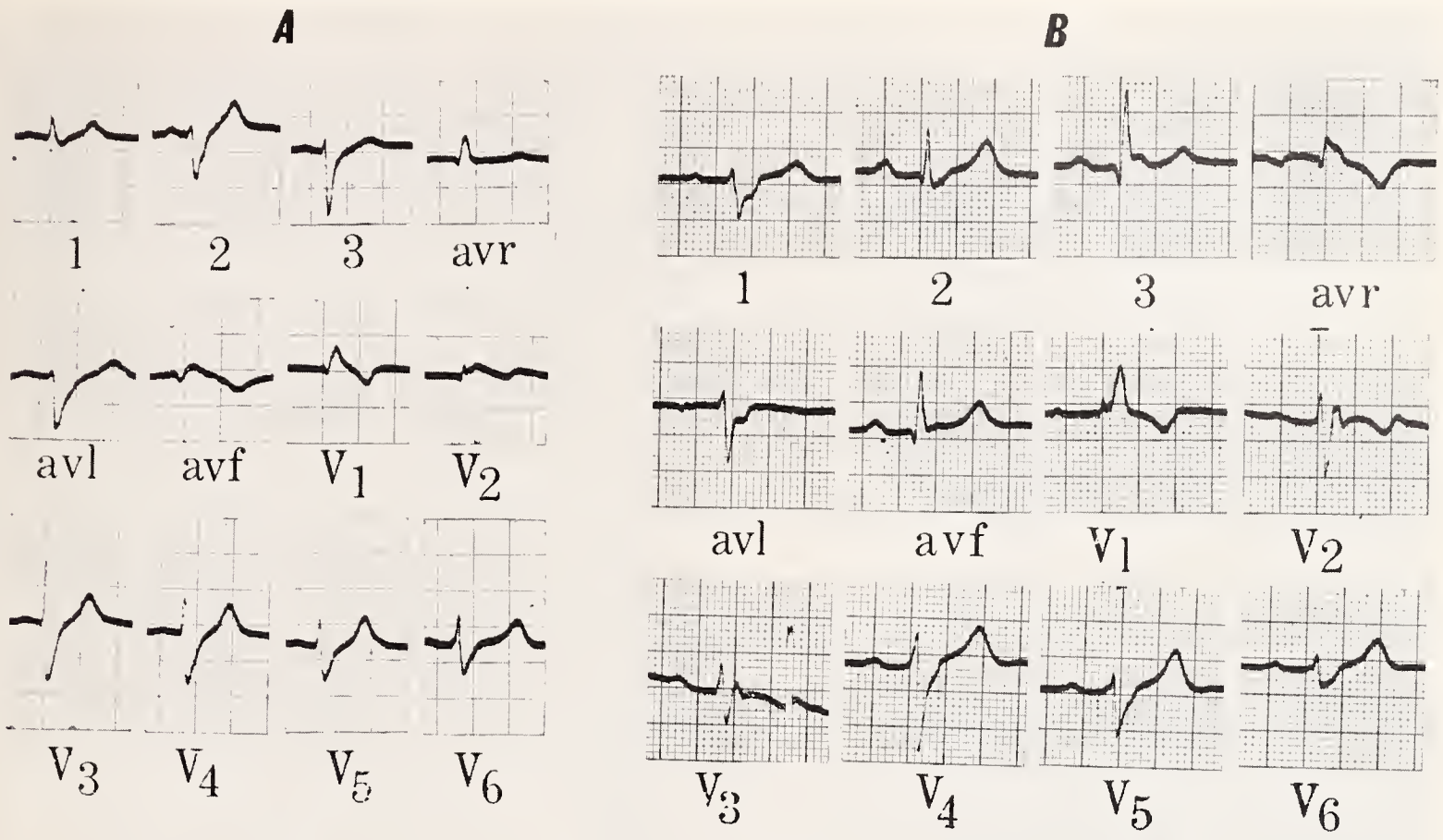


Figure 2.
A) Electrocardiogram from patient S.F. taken in 1951. PR interval is 0.12 sec., QRS is 0.12 sec., mean frontal QRS axis is minus 75°. Right bundle branch block and left axis deviation are present. B) Electrocardiogram in 1969. PR is 0.28 sec., QRS is 0.18 sec., mean frontal QRS axis is plus 150°. Note that the right bundle branch block persists but is associated with right axis deviation. The initial forces are directed superiorly and to the left, inscribing an "r" lead I and a "q" in aVF. Schematic diagram below the electrocardiograms show probable location of the conduction abnormalties.

should be discontinued when the first degree heart block is associated with QRS evidence of "bifascicular block." If the prolonged PR interval persists after a suitable interval, then one must suspect "trifascicular block." These patients should be followed closely. The development of Mobitz-Type II heart block (non-conducted P waves without progressive increase in the PR interval), lightheadedness, or true syncope in these patients are absolute indications for referral since permanent intracardiac pacing will probably be necessary.

ACKNOWLEDGEMENTS

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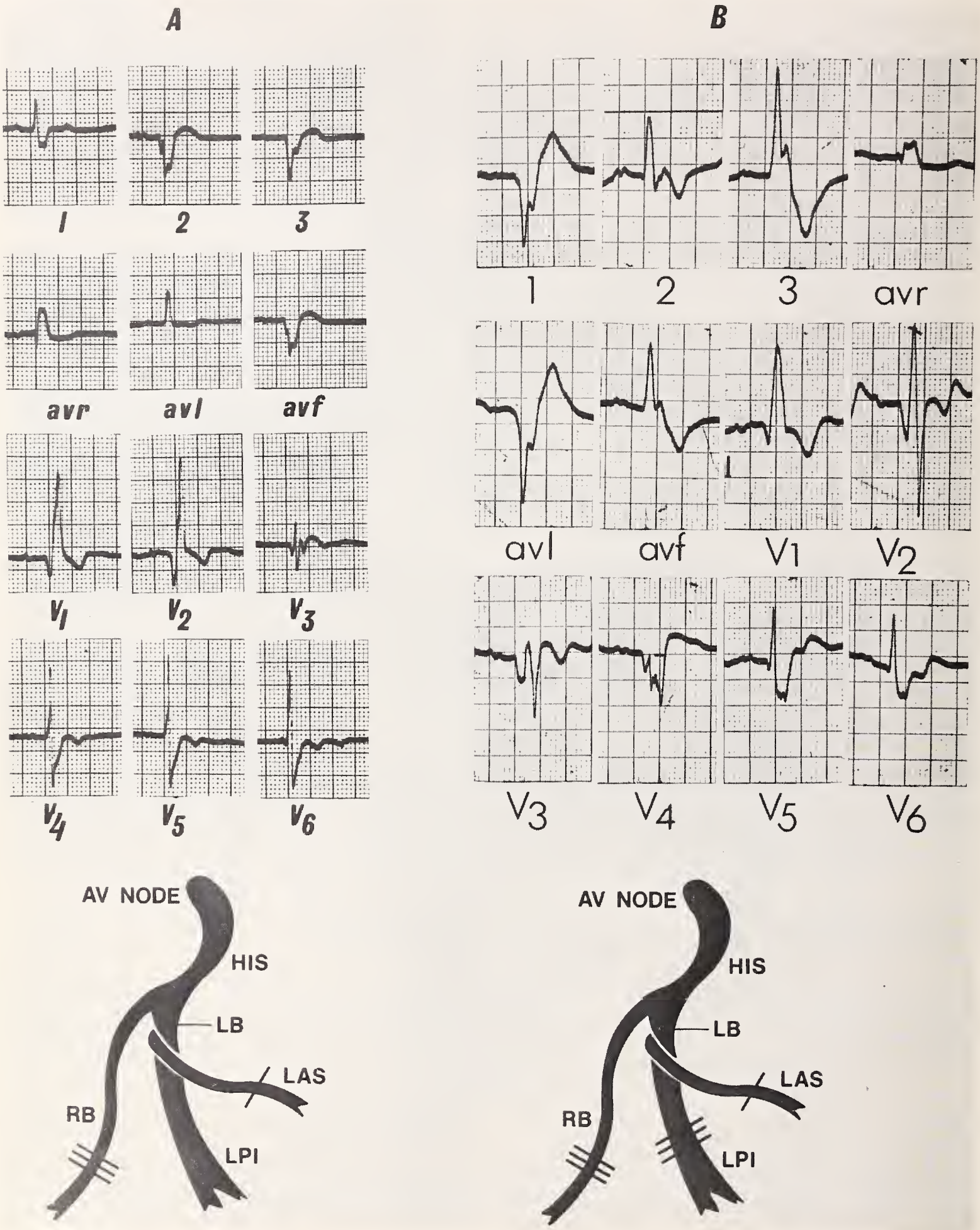


Figure 3.
A) Electrocardiogram recorded from patient S.R. in 1968. PR is 0.19 sec., QRS is 0.16 sec., mean frontal QRS is minus 80°. Right bundle branch block, left axis deviation and Q waves consistent with old myocradial infarction are present. B) Electrocardiogram in 1969. PR is 0.24 sec., QRS is 0.18 sec., mean frontal QRS axis is plus 160°. There is persistent right bundle branch block with loss of anteroseptal forces. Schematic diagram below the electrocardiogram show probably location of conduction abnormalities.

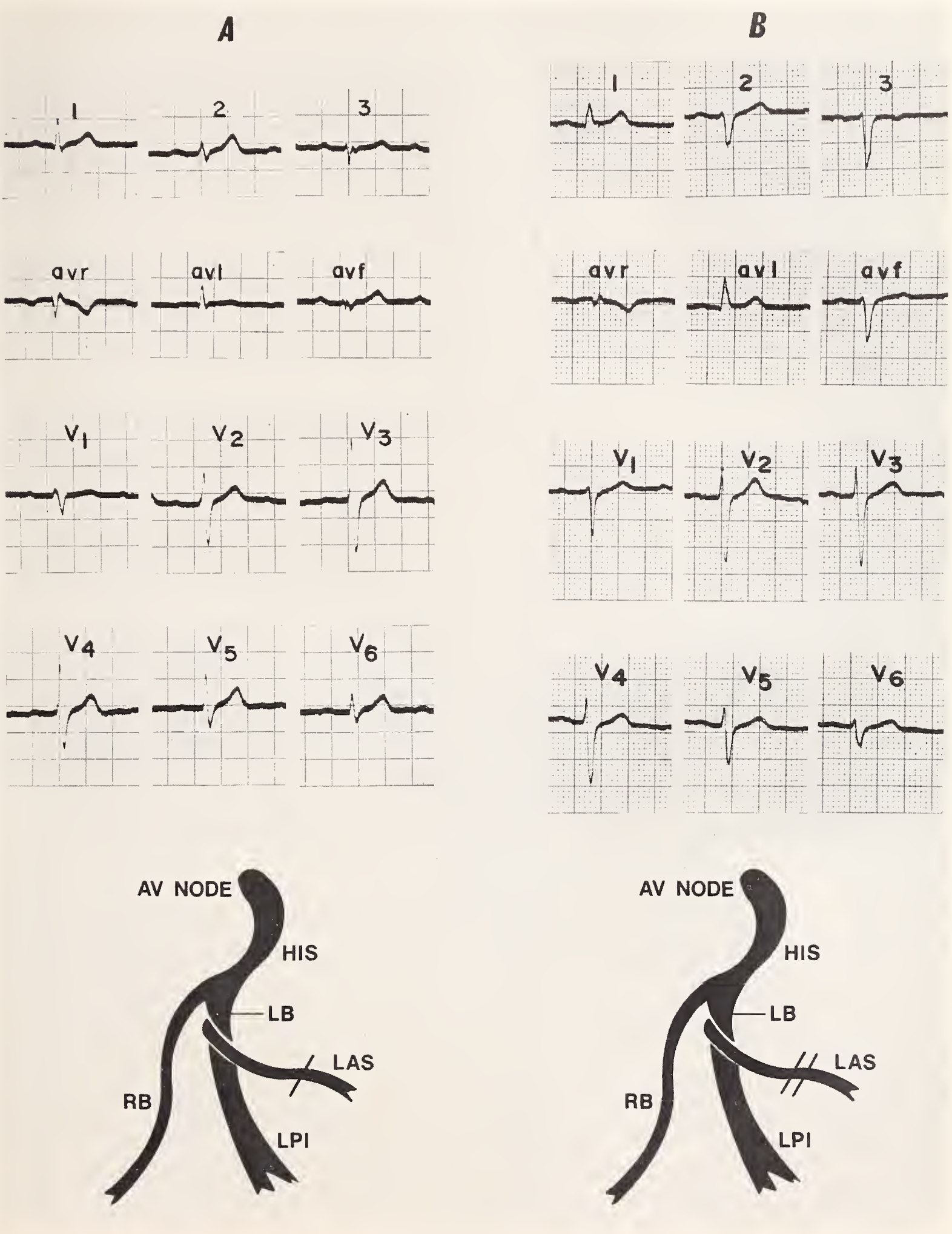


Figure 4.
A) Electrocardiogram from patient P.R. taken in 1954. PR is 0.21 sec., QRS is 0.08 sec., mean frontal QRS axis is minus 20°. B) Electrocardiogram in 1956. PR is 0.18 sec., QRS is 0.10 sec., mean frontal QRS axis is minus 60°. Schematic diagram below the electrocardiogram show probable location of conduction disturbances.

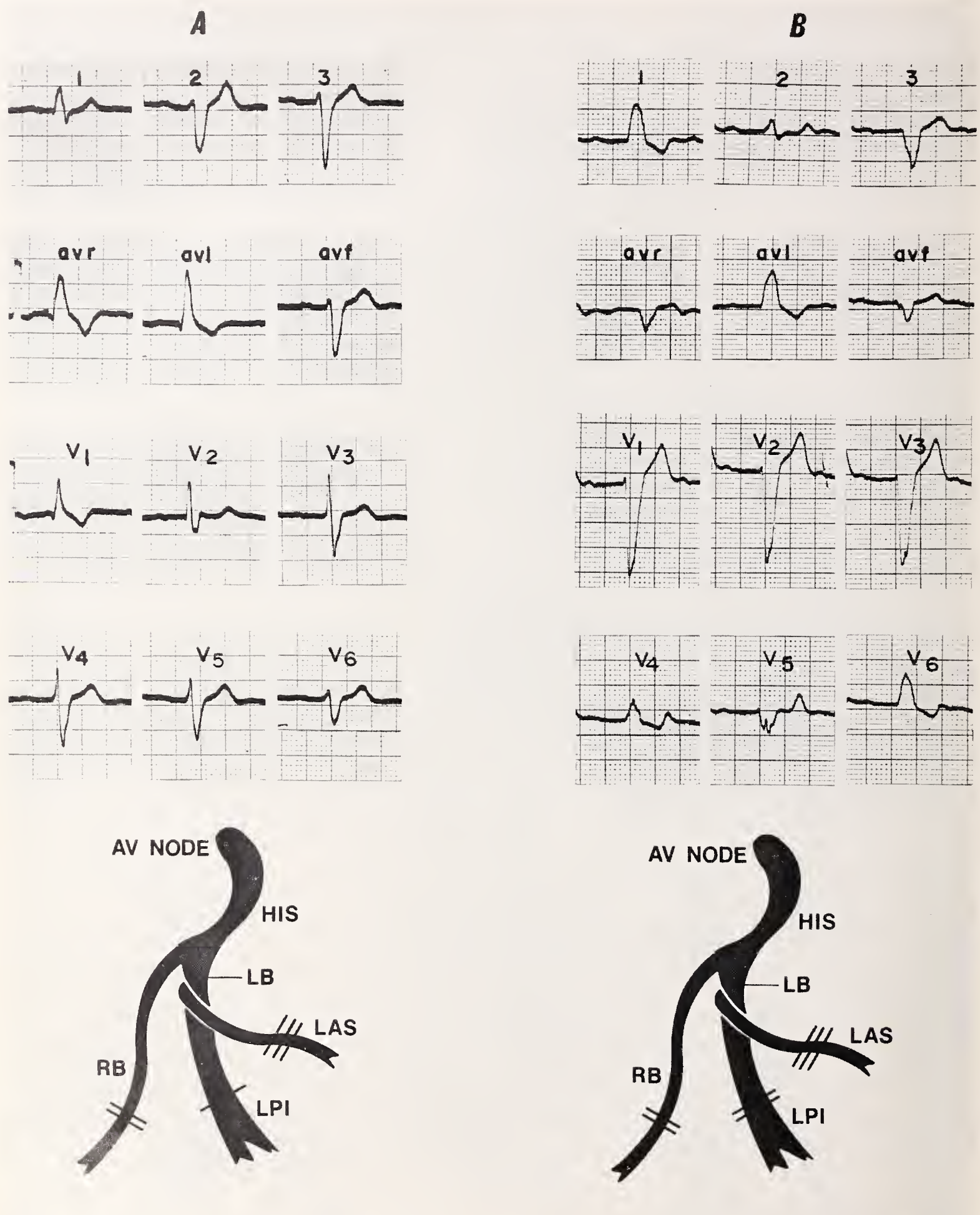


Figure 5.
A) Electrocardiogram from patient P.R. in 1966. PR is O.24 sec., QRS is 0.16 sec. Right bundle branch block and a QRS axis of minus 65° are present. B) Electrocardiogram in 1969. PR is 0.34 sec., QRS is $.16 sec., mean frontal plane QRS axis is minus 20°. Complete left bundle branch block is now present. Schematic diagram below the electrocardiogram shows probable location of the conduction abnomalities.

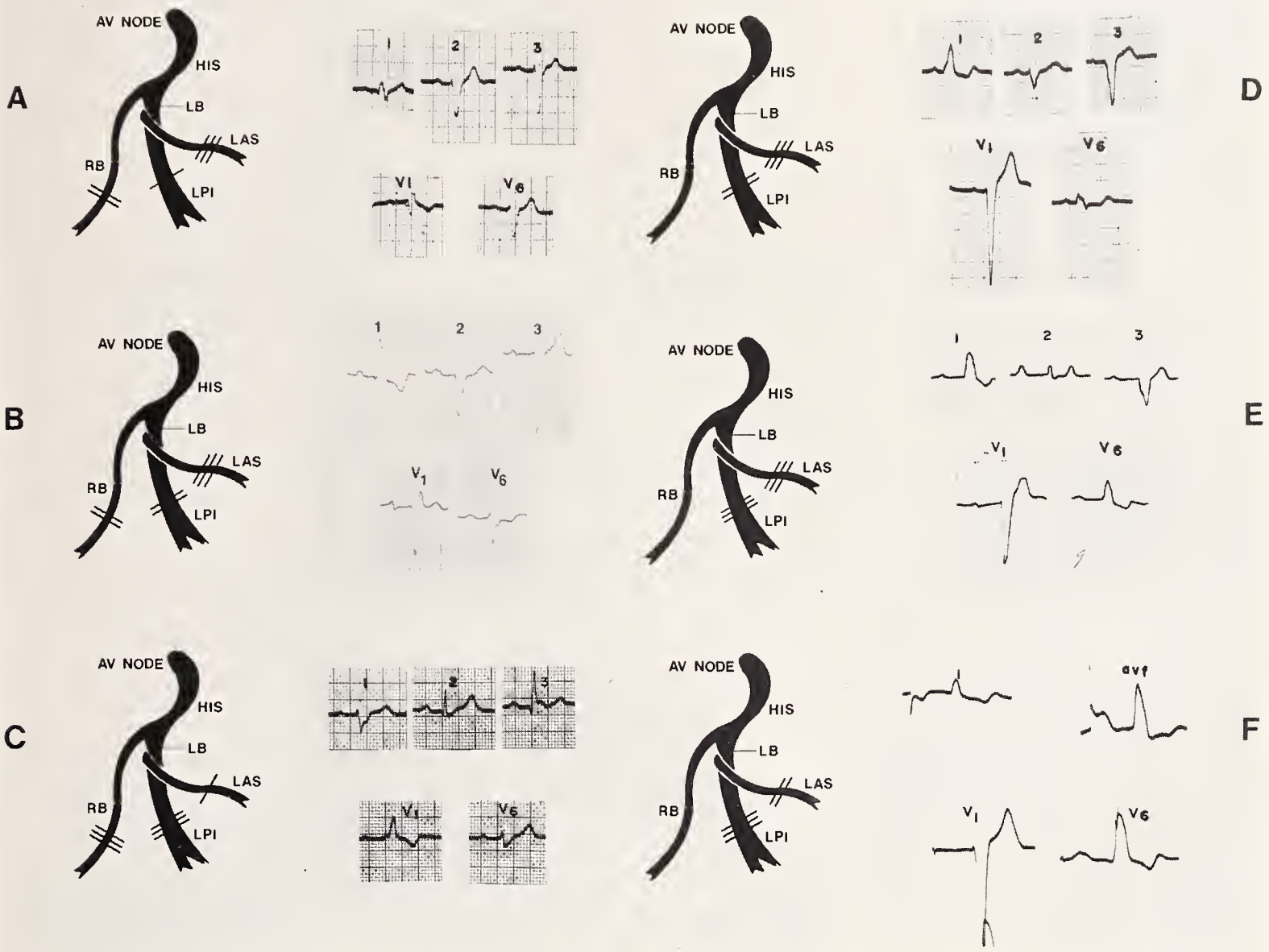


Figure 6.

Types of QRS abnormalities that should suggest the possibility of trifascicular block. The electrocardiographic leads 1, 2, and 3, V_1and V_6 are shown to the right of each diagram. The sites of conduction delays are illustrated schematically on the diagram of the trifascicular conducting system.

The presence of conduction delay through two of the fascicles can be identified by inspection of the electrocardiogram. Associated conduction delay through the third fascicle can be suspected if there is an associated history of syncope or first degree heart block. If Mobilz type II second degree heart block, sequential electrocardiographic changes indieating previous involvement of the third fascicle, or a prolonged His-ventricular interval are associated with the above QRS configurations, the diagnosis of "trifascicular block" can be made.

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CARL A. JOHNSON, M.D.

THE BINAURAL STETHOSCOPE

The discovery of the stethoscope for mediate auscultation in clinical medicine is attributed to Laennec.[1] A short history of the development of the stethoscope to its modern version was prepared and distributed by Roche Laboratories[2] — a few excerpts from this history are given:

"The fact that internal sounds have clinical significance was known to the early Greeks. Hippocrates, for instance, observed that holding the ear close to a dying persons thorax one could hear a death rattle."

"But direct auscultation had too many disadvantages." . . . "therefore in 1816 when Rene Theophile Laennec first listened to the heart thru a newly devised stethoscope, he at once revolutionized the art of physical examination." . . . "So, in this simple fashion, the first stethoscope (named from two Greek words meaning 'chest' and 'to inspect') was born."

"The idea of auscultating with both ears at once must have occurred to many, but Dr. Marsh of Cincinnati, Ohio, was the first to publish a description of a binaural stethoscope of which he was the patentee as well as inventor."

George P. Cammann designed a binaural stethoscope in 1851, but it did not become known until 1855, when an editorial in the New York Times gave it publicity.[3] Cammann himself used it on special occasions, for he was afraid habitual use might cause his ears to lose their natural sensitivity.

A stethoscope is defined as, "an instrument of various size, form, and material for performing mediate auscultation," and a binaural stethoscope as, "one with two adjustable branches designed for use with both ears."[4] Figure 1 illustrates the development of stethoscopes.

All binaural stethoscopes leak air at the meatal stethoscope junction because the auditory meatuses of most patients are not round while the earpieces of all stethoscopes are round — one cannot expect a round stethoscope earpiece to form a leakproof seal with an auditory meatus which is not round. Figure 2 C.

Movements of the head and jaws during auscultation tend to dislocate the earpieces and cause various degrees of air leaks. Figure 2 C.

With an open end stethoscope, application to the skin causes increased pressure within the stethoscope from 7 mm. Hg. with mild application to 38 mm. Hg. with firm application. Volume displacement studies indicate that that 0.2 ml. of air is displaced with mild application, and 0.5 ml. with firm application. Figure 2A and B.

Physical factors concerned with sound and noise have been extensively studied by Helmholtz,[5] and Raleigh,[6] but physiological factors have not received this attention. "How we hear is not understood."[7]

In order to understand the physiological factors concerned with hearing, one will have to accept two points of view: 1 — The body is a complete unit composed of many integrated parts, each part functioning for the good of the whole, and 2 — The peripheral arterial pulse, blood pressure, and circulation are so intimately related that there can be no ehange in one without changes in the other two. In a final analysis, the arterial pulse, blood pressure, and circulation of the auditory mechanism are essential to hearing — in their absence, we cannot hear.

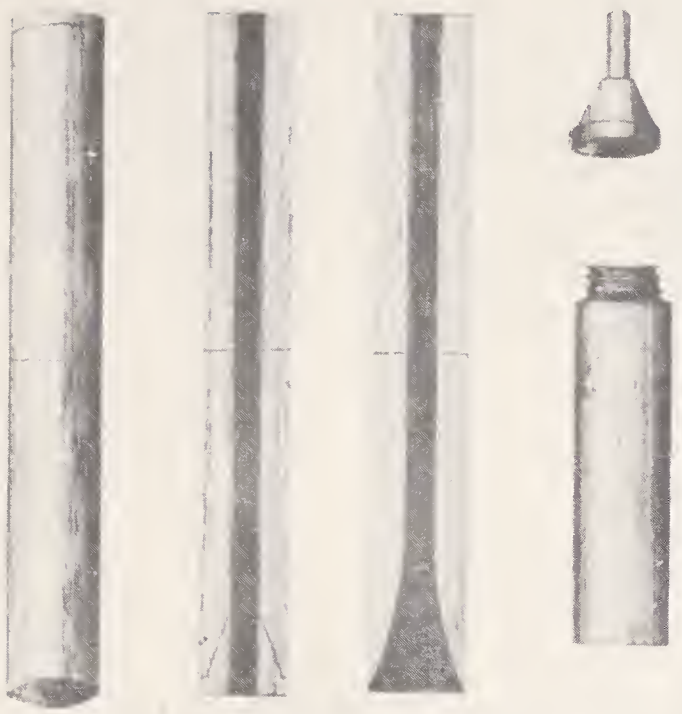
Recording equipment for studies of the external ear provides a precision, linear, time and volume calibrated record which is free of gravitational effeets and sensitive to 0.002 ml. volume change as ordinarily used — the sensitivity can be increased to 0.0005 ml. volume change.[8]

The study of the use of the stethoscope involves all parts of the external ear which are concerned with reception of sound which include the pinna, auditory meatuses, auditory canals, ear drums, and characteristics of stethoscopes as related to their transmission of sound to the external ear.

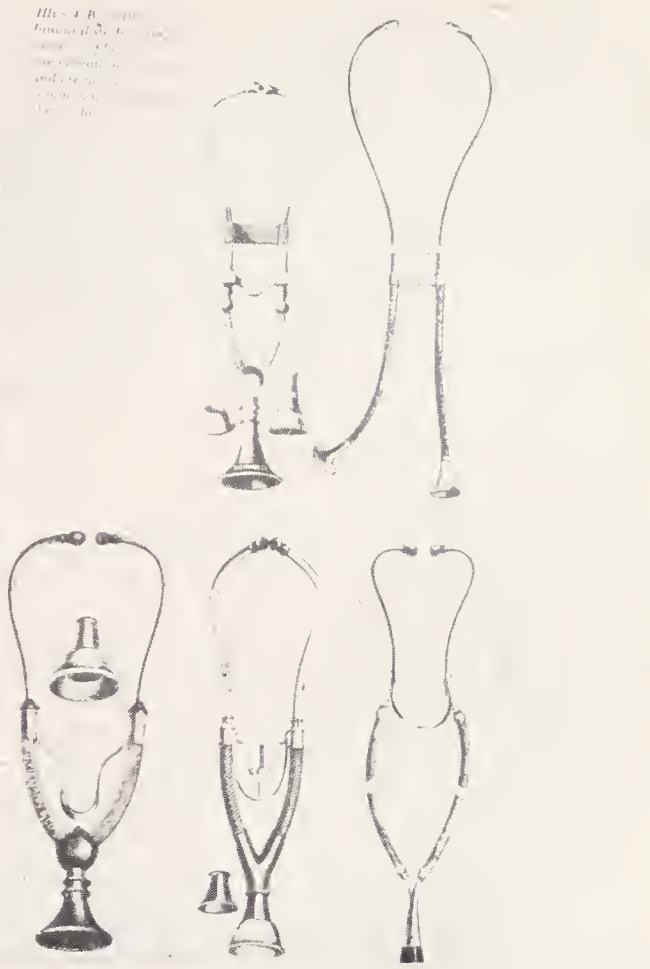
The main function of the pinna is considered to be funneling sound into the auditory canal.[9] The pinna are in a constant state of pulsatile and nonpulsatile motions: The pulsatile motions result from the pumping action of the heart in a closed elastic system — the degree of pulsatile

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Figure I



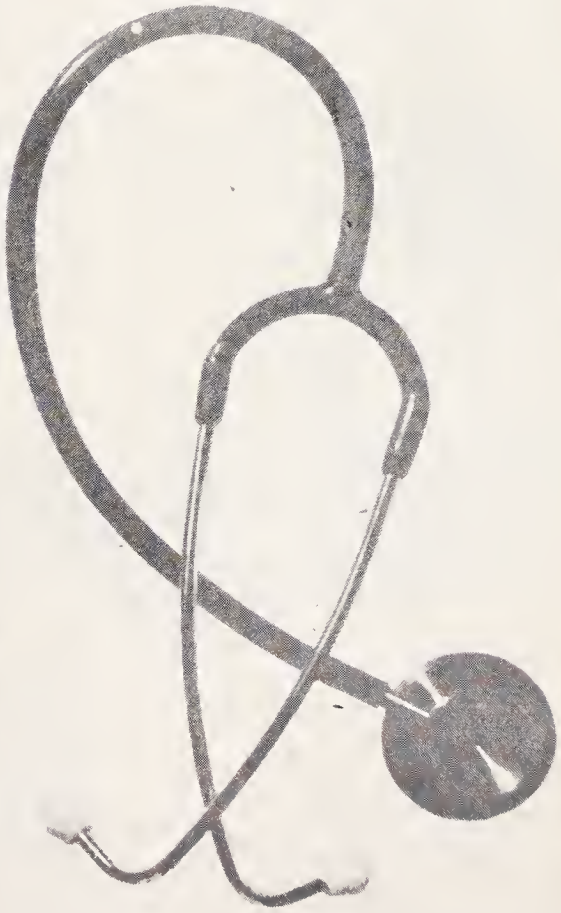
A



C



B



D

Figure 1.
A — Illustrates the monaural stethoscope invented by Laennec; B — Shows various modifications of the Laennec Stethoscope including flexible monaural stethoscopes; C — Illustrates the first binaural stethoscope and various modifications thereof; and D — An illustration of one of the many modern stethoscopes.

motions can be increased by as much as 600% vasodilitation resulting from interfering with heat loss by wearing sound barriers — the effects of vasodilitation on hearing has not been studied. The methods of study is illustrated by Figure 3 A, and vasodilitation in two patients by Figure 3 C and D. The speed of the pulse wave from the heart to the pinna can be recorded by making superimposed ECG's on the oscillometer record — the speed is approximately 0.2 seconds. The method of study is illustrated by Figure 3 B, and the speed by Figure 3 E. The pulsatile motions of the pinna can be modified by a sustained deep breath and by carotid sinus stimulation. Nonpulsatile movements of the pinna can be produced by carotid sinus stimulation, a sustained deep breath, opening and closing of the mouth, and voluntary control.

Gerhard discussed the wooden stethoscope and its use in 1850.[10] He indicated that it has wood and air conduction of sound, but in auscultation of the heart, cardiac impact was transmitted to the meatus and not desirable. Sound probe studies of the pinna indicates that it has sound receptor functions — there is a sound receptor gradient from the periphery to the meatus; one can demonstrate this with a tuning fork while the meatuses are occluded. Modern binaural stethoscopes have intervening heavy rubber tubing which are poor sound conductors — however, they do not make use of all of the sound receptor areas of the external ear

The function of the auditory canals is for transmission of sound and noise to the ear drum by air conduction. In many patients, and arterial pulse can be recorded from the auditory canal at all times; in others, on some occasions and not on other occasions; in others, it can be induced; and in others, it is not present at any time and cannot be induced. The forms of the arterial pulses from the pinna and auditory canals differ from those recorded elsewhere in the body — they have a long anacrotic limb in time and a short dicrotic limb while the reverse is true elsewhere in the body. The arterial pulse can be modified by carotid sinus stimulation and a sustained deep breath. The method of study is illustrated by Figure 4 A and B, and a patient study by Figure 4 C. The significance of the presence and peculiar form of the pulse in the canal are not known.

The function of the ear drum is to transmit sound or noise to the auditory ossicles which mechanically transmit sound or noise to the oval window. In one subject, tension of the ear drum during external deformation, improved hearing for high tones and reduced it for low tones — optimal hearing is present when the ear drum is in its normal contour. The maximal deformation of the ear drums are different in the same patient and in different patients. Repeated deformations of the ear drum do not exceed a fixed maximal level. In many patients, the externally deformed ear drum does not return to its control level, and may remain deformed for long periods of time and with impaired hearing — for this reason, recordings of the external mobility of the ear drums are made on different days. Figure 4 D.

It is not known whether the presenee of an arterial pulse in the auditory canal is a factor in hearing while using stethoscopes — most patients with a pulse in the canal have grossly normal hearing, but some have Tinnitus Aureum which alters hearing. No studies have been made on the effects of pulsations on the ear drum while using a non-leaking stethoscope; under these conditions, the pulse may impinge on the ear drum with greater intensity — if this is the case, a stethoscope with a small leak might be desirable.

There are a number of facets to the problem of estimating auscultatory blood pressures which include: 1 — limitations of the equipment; 2 — physiological changes in the soft tissues while estimating blood pressure; 3 — Nature of the Korotkov Sounds[11]; 4 — hearing of the observer; 5 — differences in blood pressure underlying the cuff; and differences in blood pressure in different locations of the body.

All modern auscultatory methods for estimating blood pressure involve the use of the binaural stethoscope. It is assumed that the arterial pulse, which is the basis for estimating blood pressure, is relatively constant — however, no two successive heart beats are alike.[12] The peripheral arterial pulse has its origin in the action of the heart, and the pulse is a reflection of cardiac activity. Normally the difference is small between two successive heart beats and cannot be recorded, but with the gross unsteady state of cardiac action, such as seen in alternation, the blood pressure of every other beat differs. The effects of leakage and pressure changes within the stethoscope from applieation have been discussed.

Figure 2

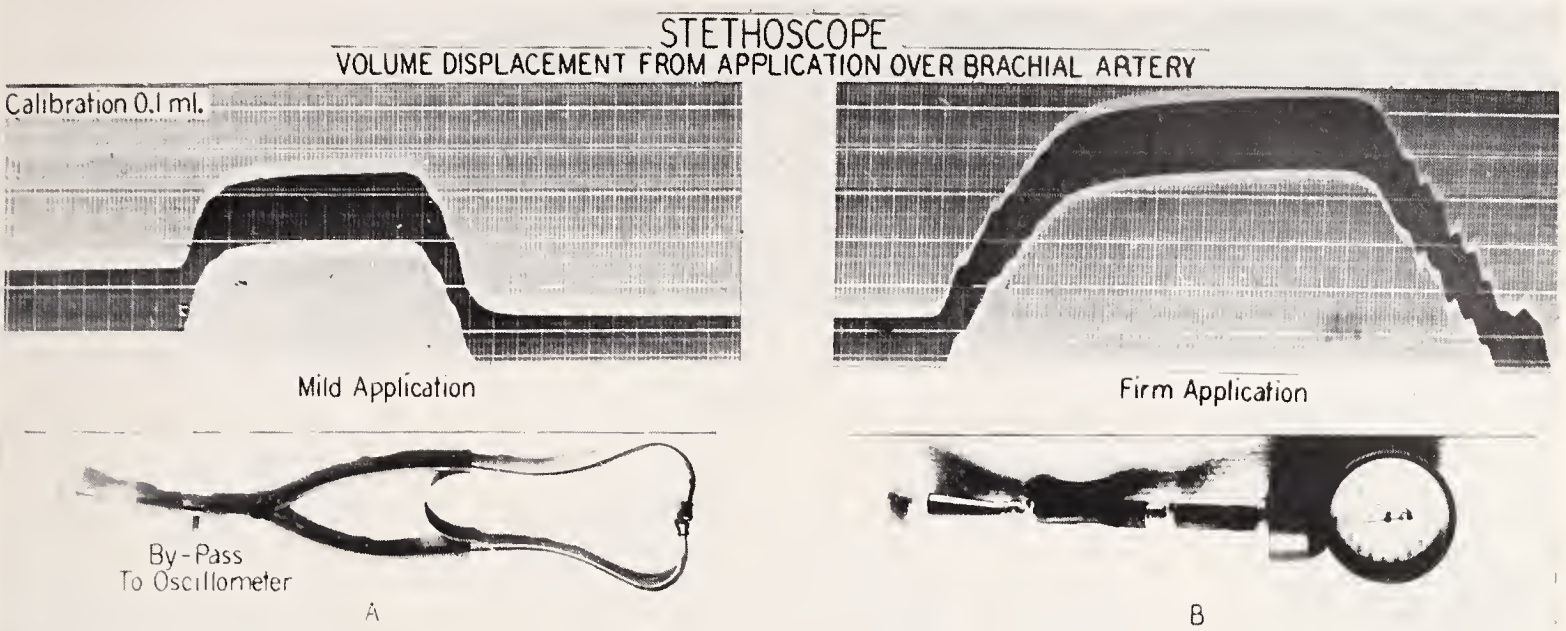
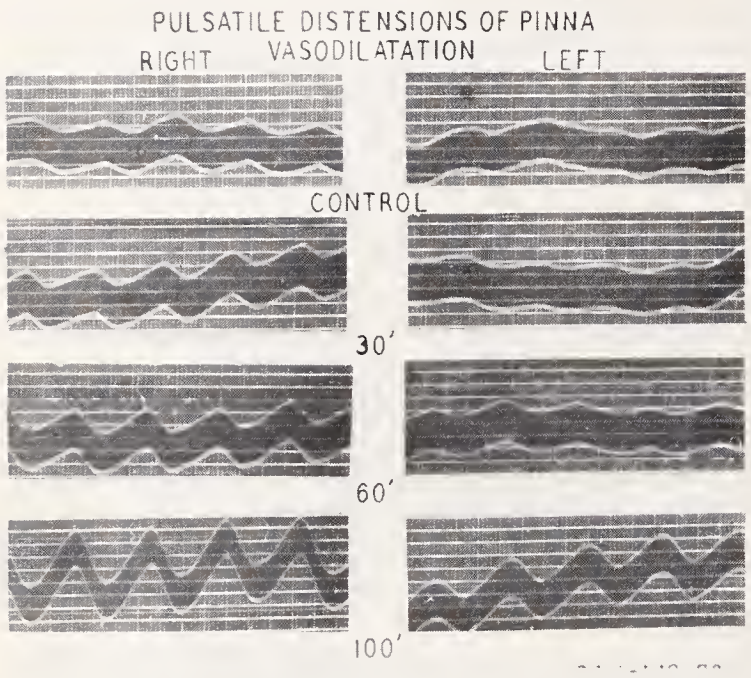


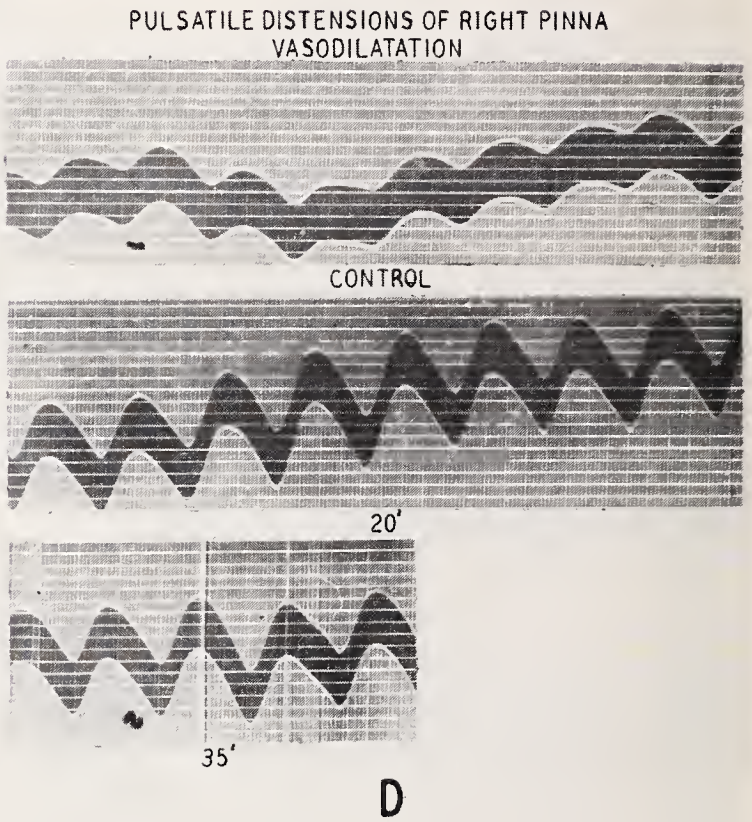
Figure 2.

A — Illustrates a modern open end binaural stethoscope with a by-pass for attachment to an oscillometer for recording volume displacement from application of the stethoseope to the skin surface — the internal volume of the stethoscope is 10 ml. With the sensing ear tips occulded, light application produced a volume displacement of about 0.2 ml., and with firm application about 0.5 ml; B — Shows an open end stethoscope applicator attached to a Tycos Aneroid Blood Pressure Gauge. Mild application to the skin surface increased the pressure within the system by 7 mm. Hg. and firm application by 38 mm. Hg. Using the volume displacement figure in (A), calculations gave approximately these figures; C — Illustrates oscillometer recordings of leakage of a stethoscope as it is used clinically. The recording mechanism of the oscillometer was set to allow a minute gravitational force to act on the system causing a downward drift. The record is calibrated to time of 0.04 seconds and volume of 0.01 ml. A — The minute gravitational force produced a dift of the recording mechanism of 0.019 ml. in 1 second; B — No leakage of the stethoscope as illustrated by the horizontal segment of the recording with no dift in 1 second; C — a slight leakage of the stethoscope with a dift of 0.003 ml. in 1 second; D — a greator leakage of the stethoscope with a dift of 0.006 ml. in 1 second; E — Gross leakage of the stethoscope with drift of 0.017 ml. in 1 second; and F — Minute and gross leakage of the stethoscope associated with slight movements of of the head.

Figure 3







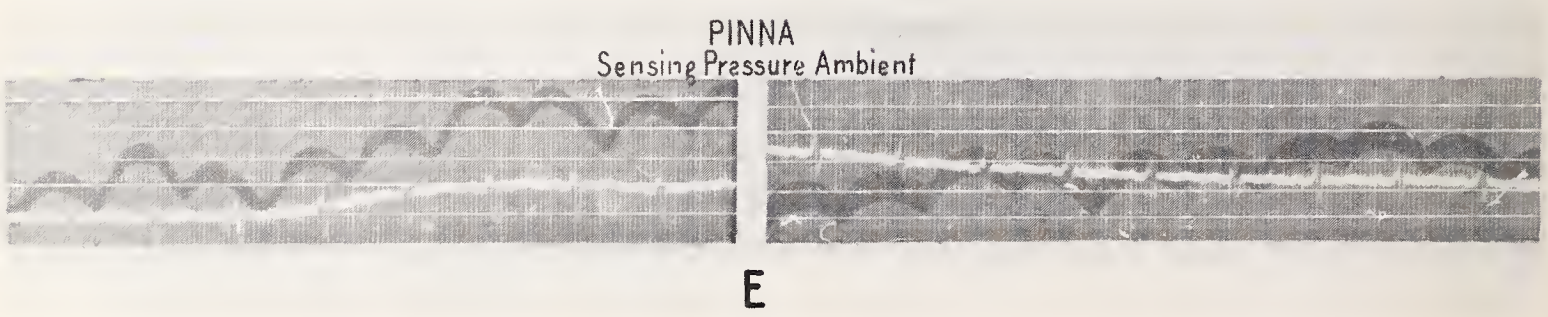


Figure 3.
A — Shows the Sound Barriers in place over both pinna with the right Sound Barrier attached to the oscillometer for recording the pulsatile distensions; B — Illustrates pulsatile distensions of both pinna from a normal, white, male, age 68 with control and after 30, 60, and 90 minutes: D — Illustrates a similar recording of the right pinna from a normal, white, male, age 67 with control and after 20 and 35 minutes. Note the marked increased distensions which are attributed to vasodilitation; B — Shows the Sound Barriers in place over both pinna with the right pinna attached to the combined oscillometer and String ECG: E — Illustrates superimposed ECG's on the oscillometer record — the speed of the pulse wave from the peak of the R wave of the ECG to the pinna is approximately 0.2 seconds. The following table shows temperature changes within the Sound Barrier after various intervals of time:

AMBIENT T°	SOUND BARRIER APPLIED	TEMPERATURE WITHIN SOUND BARRIER F — TIME IN MINUTES 5	15	30	45	60	75	AMBIENT T°
64	64	84	88	94	92	90	90	66
72	72	90	94	96	98	96	96	75

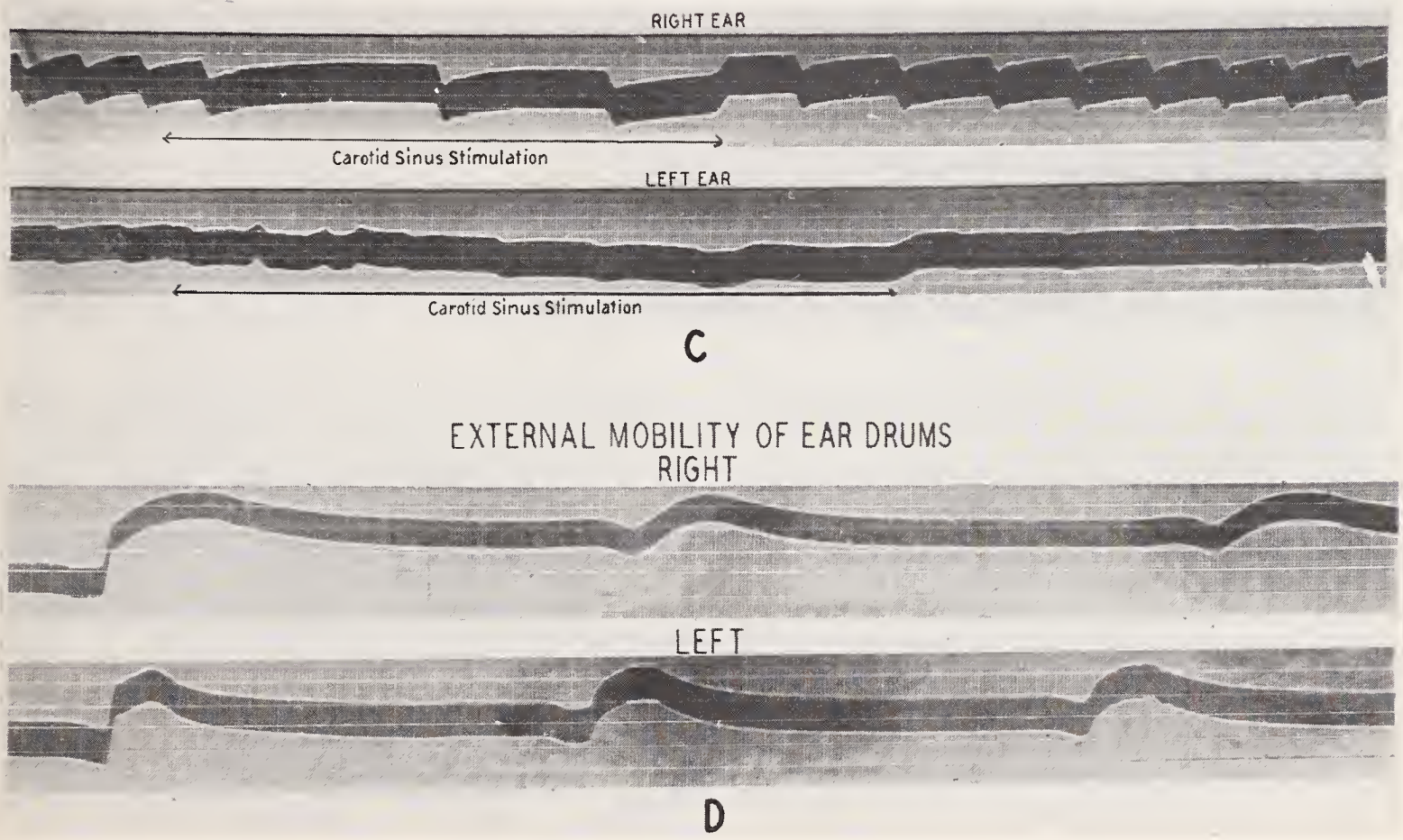
Note the progressive rise in T° within the sound barrier.

Figure 4



A

B



C

D

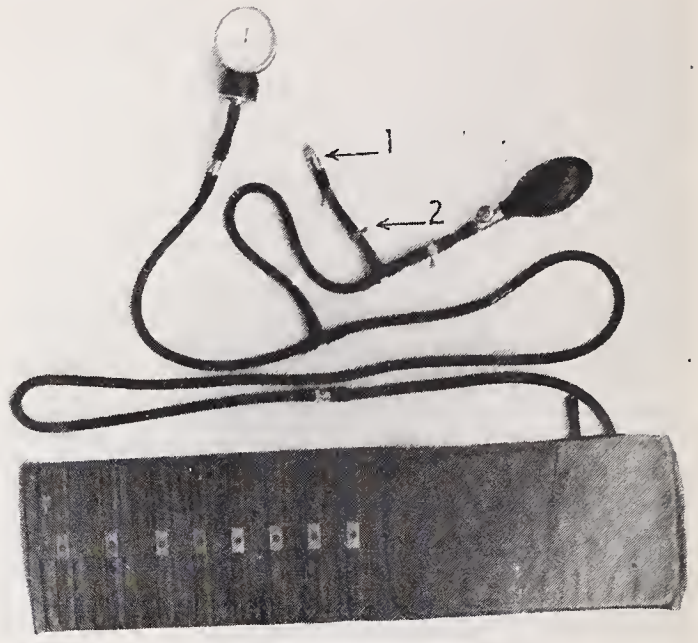
Figure 4.

A — Shows the right auditory canal communicating with the oscillometer for recording the arterial pulse from the auditry canal. This system can be used when the subject has a round auditory canal such that an air tight seal can be made with the sensing stethoscope earpiece; C — Illustrates recordings of the arterial pulse from the right and left auditory canals before, during carotid sinus stimulation, and after stimulation is discontinued. Note that the form of the arterial pulse differs from those recorded anywhere else in the body except the pinna — it has a long anacrotic limb in time and a short dicrotic limb while the reverse is true in other locations of the body. The record is calibrated to time of 0.04 seconds and volume of 0.01 ml. B — Illustrates the method for recording the external mobility of the ear drums. An obstetrical stethoscope is used because it holds the stethoscope earpieces in place for a leak proof seal better than any other stethoscope and is not so easily dislocated by movements of the head and jaws — a by-pass tube is incorporated into the right stethoseope tube for connection with the oscillometer. While a recording is being made, the patient is told to produce raised intrapharyngeal pressure by occluding his nostrils and glottis and exerting pressure in the confined space; and D — Shows that the two ear drums have different degrees of external mobility, the ear drums do not immediately return to their control contours, and repeated increased pressures do not produce external mobility beyond a certain level. The record is calibrated to time of 0.04 seconds and volume of 0.01 ml. The maximal linear extent of mobility can be calculated by determining the altitude of a segment of a sphere. Note: Records from the two ears are made on different days on order to be sure that the drum is in its normal contuor at the start of the study.

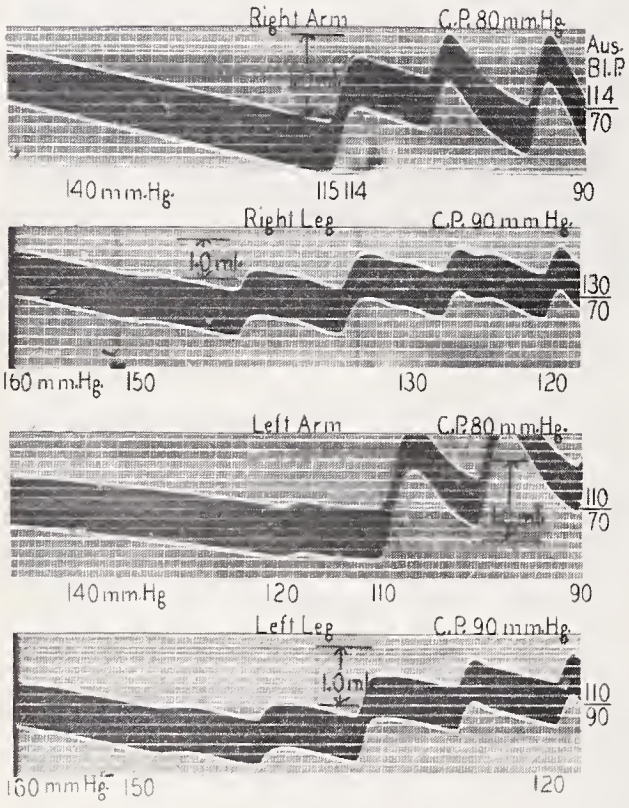
Figure 5



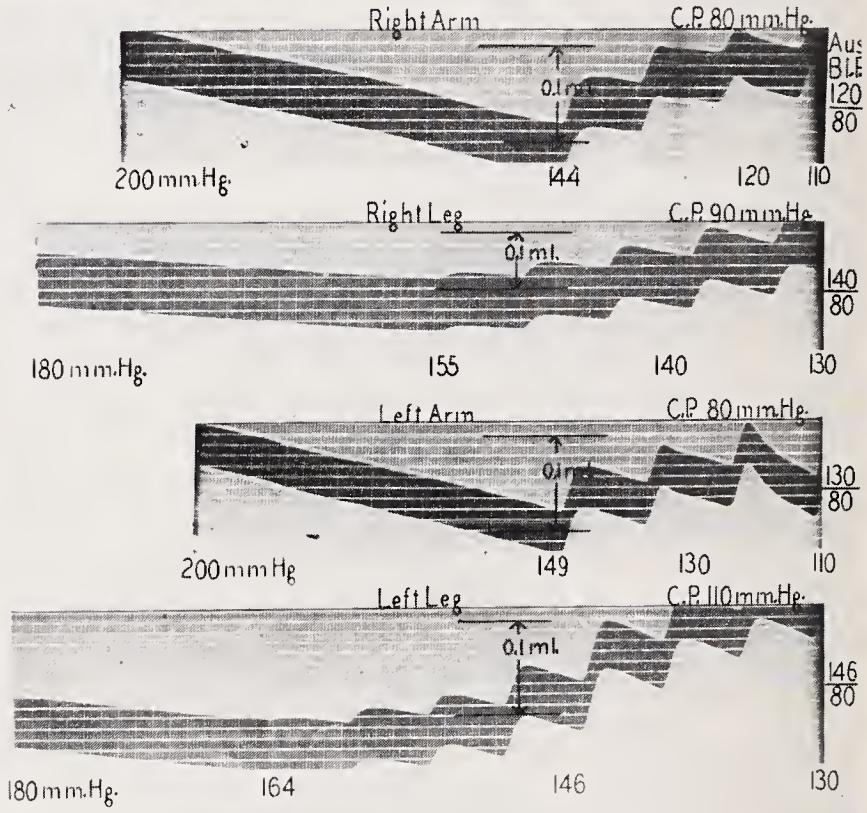
A



B



C

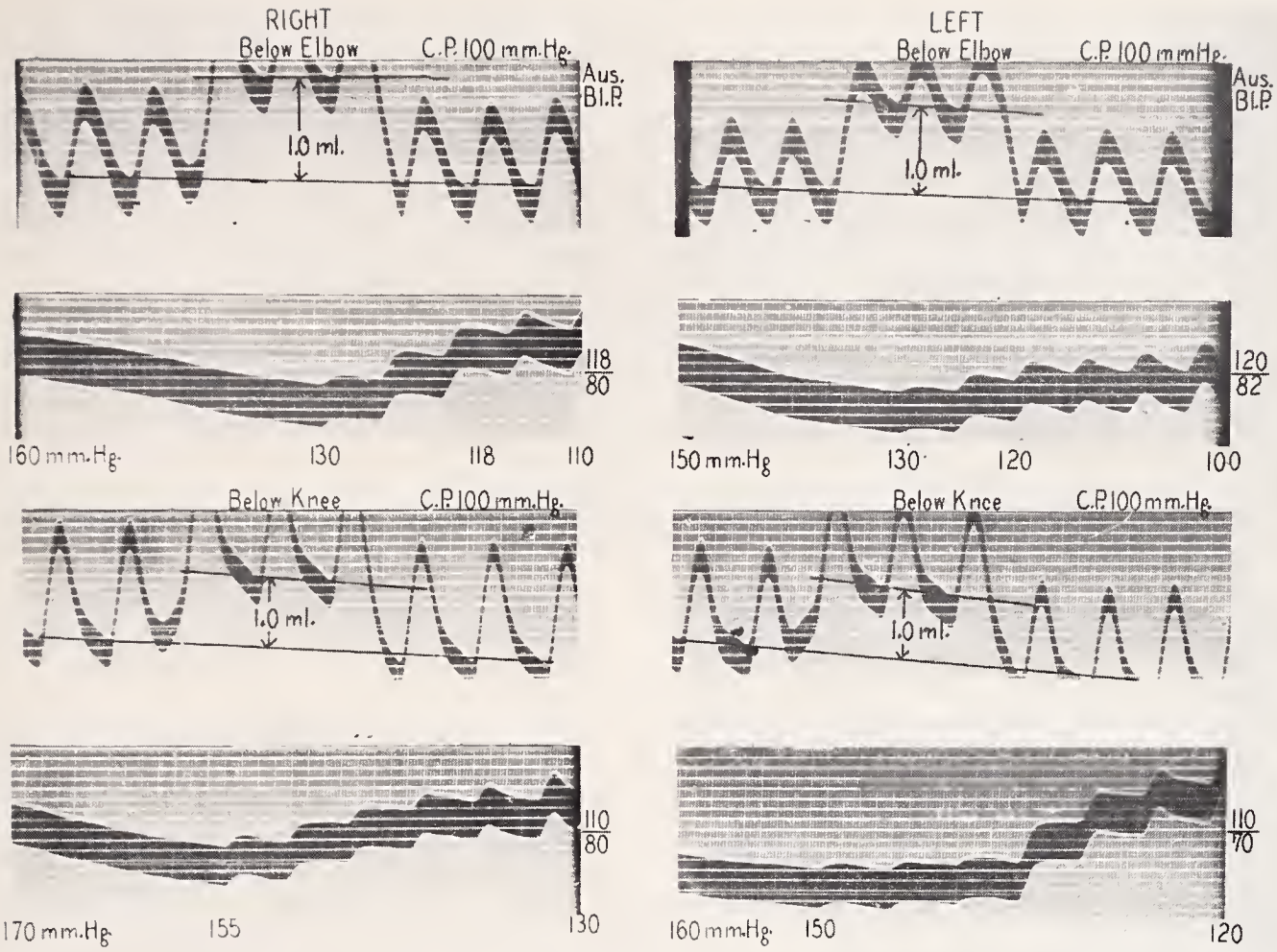


D

Figure 5.

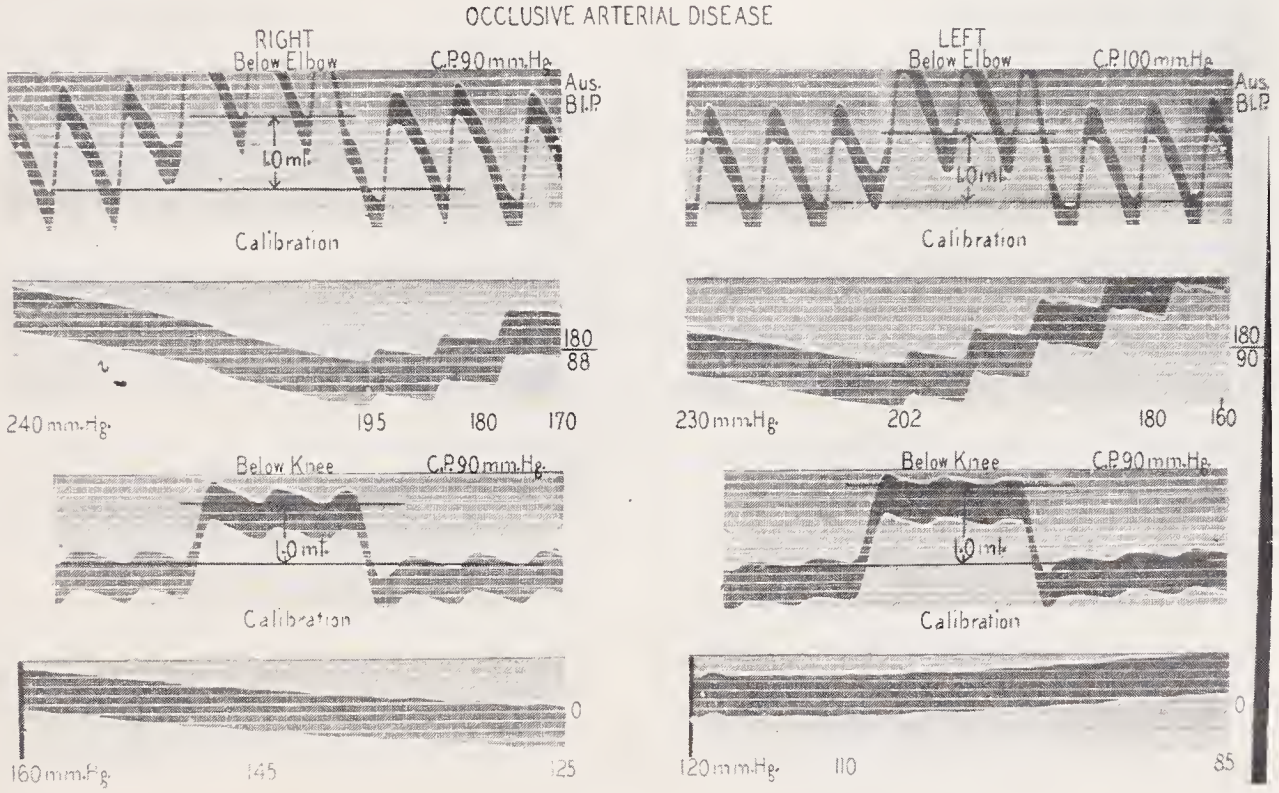
A — Illustrates the equipment for making recordings of systolic blood pressure by the double cuff method; B — Shows the details of accessories incorporated into the proximal cuff for uniform release of pressure. The cuff is a standard 12 cm. reinforced blood pressure cuff with a by-pass. The by-pass has a closure stopcock (2), and a capillary outlet (1) which is a 26gauge hypo needle with the needle portion removed — the rate of air escape is adjusted to the proper level by stopcock (2). To make a recording, the proximal cuff is attached to the oscillometer; it is inflated to approximately the predetermined diastolic blood pressure; time is allowed for stability of the base line; and auscultaory blood pressure is taken with the proximal cuff; the proximal cuff is inflated to above the systolic blood pressure while the operators finger occuldes the capillary escape; the oscillometer is adjusted for recording; recording is started simultaneously with removing the finger from the escape capillary and a note of the pressure level is made; the recording is continued until several pulse beats are recorded from the proximal cuff; the recording is stopped and a note of pressure in the proximal cuff is made. The record is processed and the starting and stopping pressures as well as the auscultatory systolic blood pressures can be interpolated on the record; C and D — Show records of the systolic blood pressures of two normal patients with interpolated auscultatory systolic blood pressures. Note: The proximal arm shrinks during deflation of the proximal cuff and then enlarges, a number of pulse beats escape under the proximal cuff before the First Korotkov Sound is heard, and ausculatory blood pressures of the legs are grossly inaccurate, while the recorded blood pressures are as accurate as those of the arms. Note 2 — Cardiac action is transmitted by the table to the legs and can be recorded — to avoid this error, the records are made with the knee elevated above the table.

Figure 6
NORMAL



A

OCCLUSIVE ARTERIAL DISEASE



B

Figure 6.
Shows records of the systolic and diastolic blood pressures of the arms and legs of two patients, one normal (A), and the other with severe occlusive arterial disease of both legs which was confirmed at autopsy. The diastolic blood pressure is determined by making serial volume calibrated recordings of the composite pulse amplitudes above the elbows and knees at cuff pressures from 140 to 0 mm. Hg. — the diastolic blood pressure is at the cuff pressure level at which the maximal composite pulse amplitude is recorded. Note: In the presence of occlusive arterial disease of the extremities the systolic and diastollic blood pressures are reduced, the maximal composite pulse amplitudes are markedly reduced in amplitude, and no auscultaory blood pressure can be estimated.

For adults, most clinicians use the reinforced 12 cm. cuff with a rubber bag. No studies were made on the influence of the nature and size of cuff used.

There are a number of changes which take place in the soft tissues under the cuff and distal to the cuff when it is inflated and deflated: 1 — the soft tissues shrink under the cuff during inflation as blood is squeezed out and enlarge during deflation and 2 — the soft tissues distal to the cuff enlarge during inflation, and shrink during deflation until the systolic pressure is reached and then enlarge. Figure 5 A and B shows the methods of study and Figure 5 C illustrates two patient studies. It should be recognized that the blood pressures of all of the arteries under the cuff are different. Peripheral to the upper arm, such as the finger, the systolic pressure is lower and the diastolic pressure is higher.

To date, the nature and reliability of the Korotkov Sounds for estimating blood pressure, are not known. The present study indicates that the escaping pulse must have a certain minimal intensity to produce the First Korotkov Sound, and this intensity is related to cardiac activity. Above the elbow, the number of escaping pulses is from 1 to 5, and the intensity 0.3 to 0.5 ml. before the First Korotkov Sound is heard.

It is recognized that auscultatory blood pressures of the legs cannot be made with any degree of accuracy.[13] If blood pressures are estimated while the patient is lying on a table, cardiac impact is transmitted by the table to the cuff and can be recorded — the cuff must not touch the table during the procedure. The number of escaping pulses are 1 to 10 or more, and their intensity 0.2 to 0.4 ml. before the First Korotkov Sound is heard.

Distal to occlusive arterial disease of the extremities, no Korotkov Sounds are produced and auscultatory blood pressures cannot be estimated. Figure 6 A illustrates auscultatory and recorded blood pressures of the arms and legs of a normal patient, and Figure 6 B from a patient with occlusive arterial disease of the legs as confirmed by autopsy.

The Korotkov Sound which corresponds to the true value of diastolic pressure is controversal. Diastolic pressure can be recorded by making serial records of the pulse amplitudes with cuff pressures from 140 to 60 mm. Hg. pressure. According to Hooke's Law, the diastolic pressure is at the pressure level at which the maximal composite pulse amplitude is recorded — this value is generally 10 to 20 mm. Hg. above the auscultatory level. In patients with high grade aortic regurgitation with Korotkov Sounds heard down to zero, the recorded diastolic pressure may be as much as 80 mm. Hg.

In all estimations of auscultatory blood pressure, the hearing of the observer, at the time of estimation, must be in the normal range. In order to have normal hearing, the contour of the ear drum must be in its normal state. The mobility of the ear drum can be altered by acutely raised intrapharyngeal pressure, acute and chronic respiratory infections, and sudden changes in altitude. Note: In a few patients with normal hearing, experimental external mobility of the ear drum could not be induced.

Summary: A study was made of the binaural stethoscope as used clinically for auscultation and estimation of blood pressure, the main features of the study include: 1 — historical development; 2 — pressure and volume changes within the stethoscope from application; 3 — leakage at the meatal stethoscope junctions; 4 — aggravation of leakage by movements of the head and jaws; 5 — anatomical and physiological characteristics of the external ears while using the stethoscope — pinna, auditory eanals, and ear drums; 6 — errors in systolic blood pressure estimations by use of the First Korotkov Sound; 7 — errors in estimation of diastolic pressure by use of the Fifth Korotkov Sound; and 8—absence of Korotkov Sounds distal to occlusive arterial disease of the extremeties.

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AIR POLLUTION IN ARIZONA

Arizonans are faced with an important problem, i.e., increasing pollution of the air we and our families are breathing. All air pollution results from three factors: 1) the amount of pollution going into the air, 2) the amount of air space that is being polluted, and 3) wind and weather conditions.

The Mitre Corporation, under contract to the Environmental Protection Agency (EPA), has recently determined a National Air Quality Index. This index combines particulate matter (dust, mist, ash, smoke, and fumes) and two pollutant gases (sulfur dioxide and nitrogen dioxide) to obtain a coefficient of air pollution based upon the secondary ambient air quality established by the federal government. Sulfur dioxide is a mild respiratory irritant which has been linked to several health problems and results from the burning of fossil fuels, such as coal and oil, for heat or to generate electricity. Nitrogen dioxide takes on a reddish or brownish hue when one looks through polluted air to the horizon and originates from automobile exhausts.

It may come as no surprise that neither Phoenix, Tucson nor environs possess an Air Quality Index as high as that of such cities as San Antonio, Texas (the cleanest big city), San Francisco, Boston, Toledo, Dallas, Scattle, Memphis, Columbus, Kansas City or Houston. These cities did and are doing something to reduce their air pollution, and are all blessed with prevailing winds which are contributory to their success. They all have converted to natural gas for heating (except Boston), have eliminated incineration as a method of destroying garbage choosing land fill as the alternative (except Houston), have reduced industrial emissions and have developed active citizen involvement. A recent decision of the U.S. Court of Appeals demands auto pollution in our cities controlled by 1975.

Arizonans are urged to press the Arizona Health Department, the Arizona Legislature and the city councils of Phoenix and Tucson to follow the pattern of success obtained by San Antonio and other urban centers to curb air air pollution without further delay.

John R. Green, M.D.

Editor's Page

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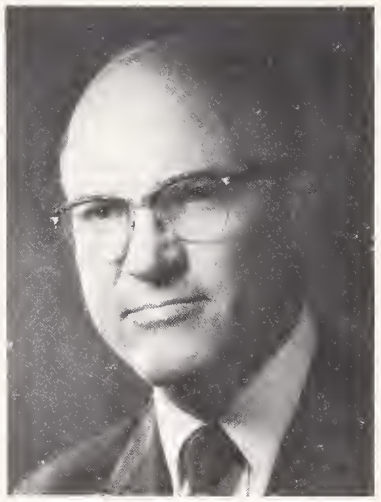
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If you're not part of the solution, you're part of the problem. Even if you're part of the solution, you're still part of the problem, one way or the other, and solutions seem a long way off. Hopefully we're wrestling with some answers that will help.

I'm thinking of the PSRO law that will affect us all in the very near future. What are the alternatives available in response to this legislation? We can boycott the whole thing. We can await clarification by regulations and then take appropriate action. We can work for repeal of the law before it goes into effect. We can proceed to formulate a PSRO proposal consistent with the law and submit it, realizing that it may not be accepted.

I'm going to deal with this last alternative only. This course of action recommends itself to me for several reasons. I do not forsee any possibility that the law will be repealed. On the basis of some information from well informed sources it is likely that proposals submitted may have an impact on regulations written to implement the law. The law may well present an opportunity for the profession to raise the quality of health care to an extent never before possible. The name of the game for all of us is *High Quality Of Care For the Benefit of Patients.* Where widespread and detailed quality review has been instituted it has been repeatedly found that most physicians practice a high quality of medicine. There are a noticeable few that practice care that is not consistent with what we know to be good.

To identify these situations and take corrective action may be painful but is more and more clearly being defined as our responsibility. In Arizona we are developing mechanisms to implement this legal and moral responsibility. Most of this is "old hat," but bears review for those not aware of present progress. Maricopa Foundation has been in existence about 3 years. Pima Foundation was organized about one and one-half years ago. United Foundations for Medical Care of Arizona, Inc. has been organized for less than one year. This is comprised of the President of the Arizona Medical Association and the President of each of the other foundations for medical care in Arizona. The last part of January 1973, the organizational meeting of the Multi-County Foundations for Medical Care of Arizona was held. Membership in this foundation is open to any physician from the outlying counties of Arizona. This structure will hopefully serve as our vehicle for compliance with PSRO legislation.

United Foundations for Medical Care of Arizona is making a proposal to HEW to become the PSRO for Arizona. The proposal will involve the utilization of each of the other foundations to function in its own area as a subcontractor. Each organization will utilize whatever method seems best adapted to the areas served.

My own concern at this point is how the widespread and geographically scattered 12 county area might best perform its review activity. It is allowed within this legislation that the review by utilization medical audit committees within the hospital can be accepted by the PSRO if it meets PSRO standards. This would seem to be the most appropriate mechanism to use in our situation. There must be some way of correlating our review activities so that we have a reporting system that gives comparable information from our hospitals. Recently I attended a workshop on the PAS-MAP system, some of our hospitals already use this system. This or a similar method of reporting would seem to offer a real advantage in doing our job. There might well need to be some on-site review by review committees from other small counties, but the over-all activity would well be followed by the type of print out available from the PAS-MAP type of service. I would recommend this for the consideration of all those who are part of this problem. May we all be giving our best effort to arriving at a good solution.

Dean's Page

MEDICAL JURISPRUDENCE

Until quite recently, most American medical schools gave only a passing nod, as it were, to the question of the application of the Law to Medicine. Encounters between legal and medical practitioners were relatively infrequent, so that each professional tended to remain profoundly ignorant of the other. That ignorance, as often happens, bred feelings of mutual hostility and distrust that are only gradually diminishing.

Fortunately, lawyers and physicians became increasingly aware of the necessity of reducing their interprofessional hostilities as rapidly as possible, if only to facilitate the disposition of the steadily growing volume of litigation and legislation with which they had to deal. It was clear, for example, that remedial measures were needed before the physician found himself in the courtroom. Consequently, the medical schools began to introduce courses in the undergraduate years, variously labeled, attempting to close the information gap for the physician and thus make it easier for lawyers and doctors to cooperate.

When we were planning our approach to providing medical students with a useful experience in this field, considerable thought was given to what it should be called. Past usage of the term "legal, or forensic, medicine" was less than satisfactory because the term referred to that part of medicine that is applied to the purpose of the law. This was not what was needed. Rather, we turned to the term "medical jurisprudence", because it refers to the application of law to the practice of medicine.

In March, 1971 Robert Joling, J.D. was appointed as Associate Professor of Medical Jurisprudence in the Division of Social Perspectives in Medicine. Dr. Joling is a forensic jurisprudent of considerable experience, having spent approximately twenty years as a trial lawyer in that

field before joining the College of Medicine faculty. This background has been immensely helpful in dealing with the legal questions that face our institutions, physician-teachers and medical students.

Integration of this "foreign" subject into the curriculum was effected through indepartmental channels. Lectures were scheduled at those times and places when the student would most likely have questions concerning the legal implications of a specific situation. In addition, an ad hoc grouping of functional problems and solutions has been handled by presenting lectures on specially requested topics of interest. These have dealt with the application and relationship of the law in homotransplantation, abortion, radiation therapy, sterilization, death and dying, medical records, and nursing care, to name but a few.

Attention was also focused on human behavior in a series of interdisciplinary seminars on topics of current interest. In this endeavor, pathologists have discussed assassinations of reknowned people; dissected brains for anatomy classes, and explained the neuropathology of the brain to surgical residents and staff personnel. Psychiatrists have dealt with the sociopathic, psychopathic and other psychiatric problems indicative of abnormal behavior. Lawyers, criminalists, physical anthropologists, zoologists, toxicologists, odontologists, and environmentalists have also participated in these presentations. Our experience to date has been very favorable; indeed, the medical school auditorium has overflowed with each seminar.

In addition to the material given to medical students, lectures have been presented to the Arizona Medical Society, Pima County College of Nurses, The Arizona State Radiology Society, The Southwestern Clinical Pharmacy Convention, The International Convention of Traffic Medicine, The International Academy of Forensic Sciences, and The American Academy of Forensic Sciences.

With the advent of the three-year curriculum, Medical Jurisprudence is proposed as an elective subject. The curriculum will provide classes twice weekly over a period of six weeks. Three, six-week courses in Medical Jurisprudence will be available in the 1973-74 academic year for the fourth year medical students. Specific course materials will involve the application of the law to all areas of medical practice.

82nd

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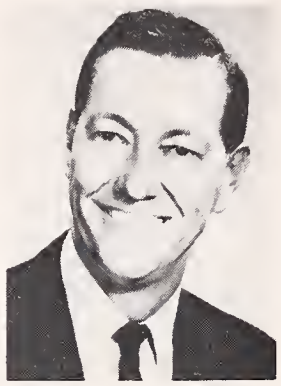
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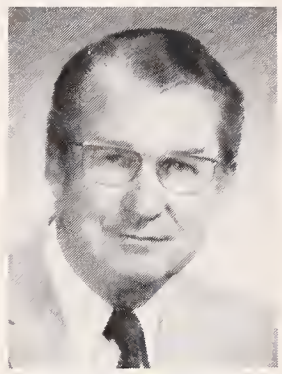
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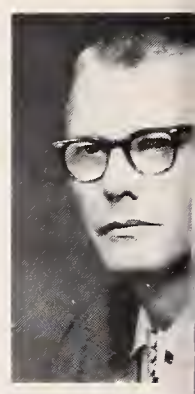
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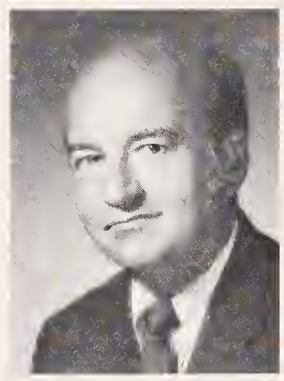
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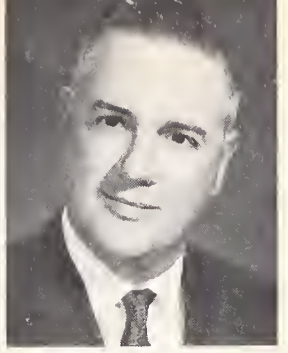
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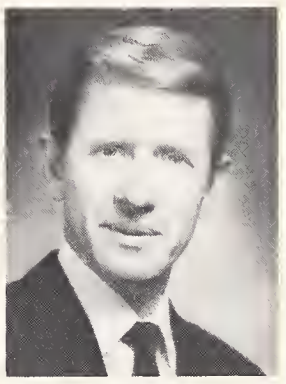
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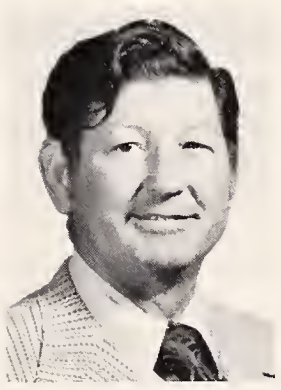
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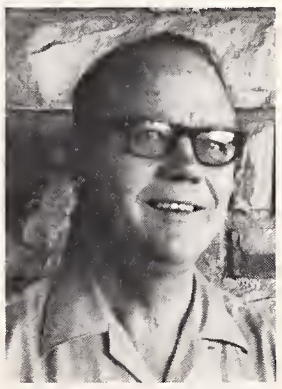
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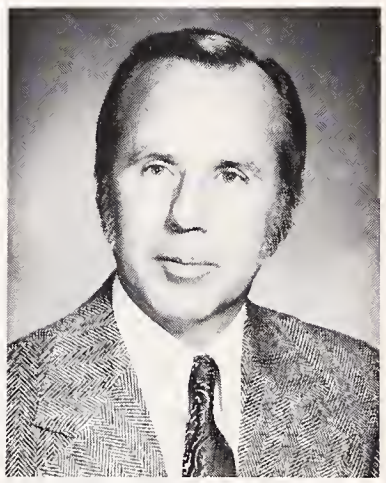
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TENNIS TOURNAMENT

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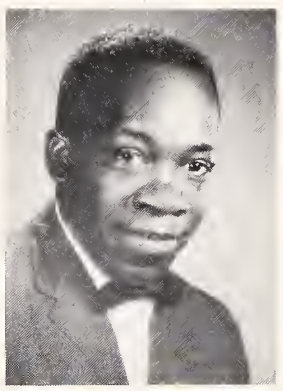
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Arizona Medicine



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MISTY COUMBE
Secretary to Executive Director

TUESDAY, APRIL 24, 1973

7:00 A.M.—Executive Committee Breakfast Lanai Room

BOARD OF DIRECTORS

9:00 A.M.—Board Meeting French Quarter
12:00 Noon—Board Luncheon French Quarter
1:00 P.M.—Exhibit Hall Opens — Visit the Exhibits
Visit the Exhibits — Registration Badge Required to Attend All Sessions
Uniformed Guard

HOUSE OF DELEGATES

1:00 to 2:00 P.M.—First Session Room A2 Convention Center
2:00 P.M.—General Session Opening Exercises Room A2 Convention Center
Call to Order
John J. Standifer, M.D., President, Arizona Medical Association
Invocation and Memorial Service
Dr. Paul David Sholin, St. Marks Presbyterian Church, Tucson, Arizona
Welcome
William E. Crisp, M.D., President, Maricopa County Medical Society
Introduction of Distinguished Guests
Honorable B. L. Tims, Mayor of Scottsdale
C. A. Hoffman, M.D., President, American Medical Association
Introduction of Incoming President
John J. Standifer, M.D.
Presidential Address
Philip E. Dew, M.D.
3:00 P.M.—Recess — Visit the Exhibits
3:30 P.M.—BLUE SHIELD ANNUAL CORPORATE BODY MEETING
First Session Room A2 Convention Center

WEDNESDAY, APRIL 25, 1973

8:00 A.M.-12:00 Noon—ArMA RESOLUTIONS REFERENCE COMMITTEE Room A2 Convention Center
to be followed by
BLUE SHIELD RESOLUTIONS COMMITTEE Room A2 Convention Center
8:00 A.M.-12:00 Noon—ArMA AMENDMENTS REFERENCE COMMITTEE .. Directors Room Above Hotel Lobby
12:00 Noon—Past Presidents Luncheon French Quarter Room No. 1
Western Orthopedic Association Luncheon Lanai Room
ArMPAC Board of Directors French Quarter Room No. 2

SPORTS

12:30 P.M.—**ANNUAL TENNIS TOURNAMENT**
Tempe Racquet & Swim Club, 2140 E. Broadway, Tempe (Entry Fee per person $3.00)
1:00 P.M.—**ANNUAL GOLF TOURNAMENT TEE-OFF TIME**
Camelback Inn Country Club, 7847 N. Mockingbird Lane, Scottsdale
Green Fee: $12.48 includes cart
2:00 P.M.—**Professional Standards Review Organizations (P.S.R.O.) Conference** Convention Center
6:00 P.M.-7:00 P.M.—**THIRD ANNUAL NATIONAL CALLIOPE CONCERT** North Poolside
Courtesy of Boyden L. Crouch, M.D.
7:00 P.M.—**ANNUAL RECEPTION** North Poolside
7:00 P.M.-11:00 P.M.—**BILL HALLOCK AND BREAKDOWN**
From The Hungry Cowboy
8:00 P.M.—**ANNUAL STEAK FRY** North Poolside
(admission by ticket only)
Dress: Western and casual

THURSDAY, APRIL 26, 1973

7:00 A.M.—BREAKFAST French Quarter
7:30 A.M.-8:45 A.M.—PANEL DISCUSSION French Quarter
Title: Health Maintenance Organizations
Discussants: Donald Brayton, M.D.
Donald DuBois, D.P.H.
Allan Harris
Charles E. Lewis, M.D.
9:00 A.M.-9:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS
SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Emergency Care and the Emergency Physician
Discussants: James C. Brill, M.D.
Leonard F. Peltier, M.D.
Donald F. Schaller, M.D.
James L. Schamadan, M.D.
Donald Skinner, M.D.
SECTION II Room A-1 Convention Center
Title: Current Concepts in Ophthalmologic Plastic & Reconstructive Surgery
Speaker: Robert Dryden, M.D.
Moderator: Donald Ziehm, M.D.
SECTION III Room A-2 Convention Center
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title. H.M.O. Workshop
Discussants: Donald Brayton, M.D.
Donald DuBois, D.P.H.
Allan Harris
Charles E. Lewis, M.D.

THURSDAY, APRIL 26, 1973

SECTION IV Directors Room Above Hotel Lobby
Title: Dissection Aneurysm of the Thoracic Aorta as a Cause of Acute Myocardial Infarction
Speaker: Marcus D. McDivett, M.D.
Moderator:

9:30 A.M.-10:00 A.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Emergency Care and The Emergency Physician
Discussants: James C. Brill, M.D.
Leonard F. Peltier, M.D.
Donald F. Schaller, M.D.
James L. Schamadan, M.D.
Donald Skinner, M.D.

SECTION II Room A-1 Convention Center
Title: Post-Traumatic Headaches of Cervical Origin
Speaker: Jaime Vargas, M.D.
Moderator: Donald Ziehm, M.D.

SECTION III Room A-2 Convention Center
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: H.M.O. Workshop
Discussants: Donald Brayton, M.D.
Donald DuBois, M.D.
Allan Harris
Charles E. Lewis, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Angiography — Major Role in the Diagnosis & Therapy of Gastrointestinal Hemorrhage
Speaker: William A. Renert, M.D.
Moderator:

10:00 A.M.-10:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Tite: Emergency Care and the Emergency Physician
Discussants: James C. Brill, M.D.
Leonard F. Peltier, M.D.
Donald F. Schaller, M.D.
James L. Schamadan, M.D.
Donald Skinner, M.D.

SECTION II Room A-1 Convention Center
Title: Prenatal Stilbesterol & Vaginal Carcinoma in Subsequent Daughters
Speaker: Leo Lagasse, M.D.
Moderator: Donald Ziehm, M.D.

SECTION III Room A-2 Convention Center
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: H.M.O. Workshop
Discussants: Donald Brayton, M.D.
Donald DuBois, D.P.H.
Allan Harris
Charles E. Lewis, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Muscle Disease: A Multidisciplinary Approach
Speaker: Lawrence Z. Stern, M.D.
Moderator:

10:30 A.M.-11:00 A.M.—VISIT THE EXHIBITS — VISIT THE EXHIBITS — VISIT THE EXHIBITS
(Coffee is served in the Scientific Exhibit Hall)

11:00 A.M.-11:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: Flight Accidents with Physicians as Pilots-in-Command
Speaker: John C. Duffy, M.D.
Moderator: James L. Schamadan, M.D.

SECTION II Room A-1 Convention Center
Title: Contraceptives and Complications
Speaker: George Bray, M.D.
Moderator: W. A. Susong, M.D.

SECTION III Room A-2 Convention Center
Title: Bilateral Subcutaneous Mastectomy & Prosthetic Reconstruction
Speakers: Jean P. Angelehik, M.D.
Richard H. Wohl, M.D.
Moderator: William C. Scott, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 11 A.M. — Ends 12 Noon)
Title: Management of Early Breast Cancer
Speaker: Herbert I. Machleder, M.D.

11:30 A.M.-12 Noon—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: Emergency Treatment of Venomous Bites & Stings
Speaker: Jack O. McFarland, M.D.

THURSDAY, APRIL 26, 1973

Moderator: James L. Schamadan, M.D.

SECTION II Room A-1 Convention Center
Title: Family Planning Counseling: Decision Making in the Choice of Method
Speaker: Donald R. Ostergard, M.D.
Moderator: W. A. Susong, M.D.

SECTION III Room A-2 Convention Center
Title: Cervical Esophagoscomy & Improved Technique for Alimentation of the Debilitated Patient
Speaker: Paul Ward, M.D.
Moderator: William C. Scott, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 11 A.M. — Ends 12 Noon)
Title: Management of Early Breast Cancer
Speaker: Herbert I. Machleder, M.D.

12 Noon-2:00 P.M.—SPECIALTY SOCIETY LUNCHEONS
Arizona Academy of Family Physicians Kudu Room
Arizona Obstetrical and Gynecological Society French Quarter Room No. 2
Arizona Society of Physical Medicine and Rehabilitation French Quarter Room No. 3
Arizona Chapter, American College of Chest Physicians.....Lanai Room

2:00 P.M.-2:30 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 2 P.M. — Ends 3:00 P.M.)
Title: Head & Neck Neoplasms
Discussants: Yosef Pilch, M.D.
Paul Ward, M.D.

SECTION II Room A-1 Convention Center
Title Hypoglycemia — Fact or Fancy
Speaker: George Bray, M.D.
Moderator: Philip Levy, M.D.

SECTION III — WORKSHOP Room A-2 Convention Center
(Workshop starts 2 P.M. — Ends 3:00 P.M.)
Title: Contemporary Issues in Permanent Contraception. (Sterilization)
Discussants: I. M. Cushner, M.D.
Richard Ehrlich, M.D.
Donald R. Ostergard, M.D.
Robert Pasnau, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Status of Total Knee Joint Replacement
Speaker: Gerald Finerman, M.D.
Moderator: Neopito L. Robles, M.D.

2:30 P.M.-3:00 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 2 P.M. — Ends 3:00 P.M.)
Title: Head & Neck Neoplasms
Discussants: Yosef Pilch, M.D.
Paul Ward, M.D.

SECTION II Room A-1 Convention Center
Title: Preliminary Evaulation of New Non-Steroidal Anti-Inflamatory Agents in Rheumatoid Arthritis
Speakers: DeWitt W. Englund, M.D.
Benjamin K. Harris, M.D.
Sanford H. Roth, M.D.
Moderator: Philip Levy, M.D.

SECTION III — WORKSHOP Room A-2 Convention Center
(Workshop starts at 2 P.M. — Ends 3:00 P.M.)
Title: Contemporary Issues in Permanent Contraception. (Sterilization)
Discussants: I. M. Cushner, M.D.
Richard Ehrlich, M.D.
Donald R. Ostergard, M.D.
Robert Pasnau, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Non-Invasive Techniques for the Early Detection & Prevention of Strokes
Speakers: Mark M. Kartchner, M.D.
William S. Masland, M.D.
Lorin P. McRae, Ph.D.
Frank D. Morrison, M.D.
Moderator: Neopito L. Robles, M.D.

3:00 P.M.-3:30 P.M.—VISIT THE EXHIBITS — VISIT THE EXHIBITS — VISIT THE EXHIBITS
(Coffee is served in the Scientific Exhibit Hall)

3:30 P.M.-4:00 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: Ileus — A Term for all Physicians
Speaker: H. Stephen Thomas, M.D.
Moderator: Eugene Leibsohn, M.D.

SECTION II — PANEL Room A-1 Convention Center
(Panel starts at 3:30 P.M. — Ends 5 P.M.)
Title: Abortion Panel
Discussants: Paul H. Andreine, M.D.

Fred Mecklenburg, M.D.
Robert C. Shapiro, M.D.
Robert H. Tamis, M.D.
Moderator: Charles E. Henderson, M.D.

SECTION III Room A-2 Convention Center
Title: Management of Abdominal Aneurysms
Speaker: Herbert Machleder, M.D.
Moderator: John E. Oakley, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. — Ends 5 P.M.)
Title: Indications & Results of Total Hip Joint Replacement
Discussants: Joseph A. Dupont, M.D.
Gerald Finerman, M.D.
Paul J. Nichols, M.D.
John R. Schwartzmann, M.D.

4:00 P.M.-4:30 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
(Presentation starts at 4 P.M. — Ends 5 P.M.)
Title: Current Developments in Gonorrhea Control
Speaker: Ralph H. Henderson, M.D.
Assistant Chief, Venereal Disease Branch, Center for Disease Control, Atlanta, Georgia to be followed by
Title: Effective Use of Current Gonorrhea Culture Methods
Speaker: Douglas S. Kellogg, Ph.D.
Chief, Venereal Disease Research Section, Center for Disease Control, Atlanta, Georgia
Moderator: Eugent Leibsohn, M.D.

SECTION II — PANEL Room A-1 Convention Center
(Panel starts at 3:30 P.M. — Ends 5 P.M.)
Title: Abortion Panel
Discussants: Paul H. Andreine, M.D.
Fred Mecklenburg, M.D.
Robert C. Shapiro, M.D.
Robert H. Tamis, M.D.
Moderator: Charles E. Henderson, M.D.

SECTION III Room A-2 Convention Center
Title: Management of Malignant Melanoma
Speaker: Yosef Pilch, M.D.
Moderator: John E. Oakley, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. — Ends 5 P.M.)
Title: Indications & Results of Total Hip Joint Replacement
Discussants: Joseph A. Dupont, M.D.
Gerald Finerman, M.D.
Paul J. Nichols, M.D.
John R. Schwartzmann, M.D.

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Fred Mecklenburg, M.D.
Robert C. Shapiro, M.D.
Robert H. Tamis, M.D.
Moderator: Charles E. Henderson, M.D.

SECTION III Room A-2 Convention Center
Title: The Treatment of Traumatic Disruption of the Descending Thoracic Aorta
Speaker: Charles M. Rucker, M.D.
Moderator: John E. Oakley, M.D.

SECTION IV — WORKSHOP Direetors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. — Ends 5 P.M.)
Title: Indications and Results of Total Hip Joint Replacement
Discussants: Joseph A. Dupont, M.D.
Gerald Finerman, M.D.
Paul J. Nichols, M.D.
John R. Schwartzman, M.D.

7:00 P.M.—ARIZONA MEDICAL POLITICAL ACTION COMMITTEE RECEPTION Convention Center

8:00 P.M.—ARIZONA MEDICAL POLITICAL ACTION COMMITTEE BANQUET ..Convention Center
Speaker: Burton S. Barr (R) Majority Leader "Health Care Legislation in Arizona"

FRIDAY, APRIL 27, 1973

7:00 A.M.—BREAKFAST French Quarter

7:30 A.M.-8:45 A.M.—PANEL DISCUSSION French Quarter
Title: Ambulatory Surgical Facilities — Whose Province?
Discussants: David M. Cohen, M.D.
Laurence M. Linkner, M.D.
Wilfred M. Potter, M.D.
Wallace A. Reed, M.D.

9:00 A.M.-9:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS
SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts 9 A.M. — Ends 10:30 A.M.)
Title: Diet, Cholesterol, Lipoprotein & Heart Disease
Discussants: George Bray, M.D.
Philip Levy, M.D.
SECTION II Room A-1 Convention Center
Title: The Adolescent Clinic: A Model & Profile
Speakers: Lonnie K. Zeltzer, M.D.
Paul M. Zeltzer, M.D.
Moderator: Luis S. Tan, M.D.
SECTION III Room A-2 Convention Center
Title: Development of Criteria for Quality Assurance of Ambulatory Child Health Care
Speaker: Hugh C. Thompson, M.D.
Moderator: W. Scott Chisholm, M.D.
SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Current Concepts in Psychosomatic Medicine
Speaker: Robert Pasnau, M.D.

9:30 A.M.-10:00 A.M.—CONCURRENT SCIENTIFIC SESSIONS
SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Diet, Cholesterol, Lipoprotein & Heart Disease
Discussants: George Bray, M.D.
Philip Levy, M.D.
SECTION II Room A-1 Convention Center
(Presentation starts at 9:30 A.M. — Ends 10:30 A.M.)
Title: Immunotherapy of Cancer — Present Status and Future Potential
Speaker: Yosef Pilch, M.D.
Moderator: Luis S. Tan, M.D.
SECTION III Room A-2 Convention Center
Title: The Hyperactive Child
Speaker: Edward R. Ritvo, M.D.
Moderator: W. Scott Chisholm, M.D.
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
Title: Current Concepts in Psychosomatic Medicine
Speaker: Robert Pasnau, M.D.

10:00 A.M.-10:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS
SECTION I — WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Diet, Cholesterol, Lipoprotein & Heart Disease
Discussants: George Bray, M.D.
Philip Levy, M.D.
SECTION II Room A-1 Convention Center
(Presentation starts at 9:30 A.M. — Ends 10:30 A.M.)
Title: Immunotherapy of Cancer — Present Status and Future Potential
Speaker: Yosef Pilch, M.D.
Moderator: Luis S. Tan, M.D.
SECTION III Room A-2 Convention Center
Title: Infantile Autism
Speaker: Edward R. Ritvo, M.D.
Moderator: W. Scott Chisholm, M.D.
SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 9 A.M. — Ends 10:30 A.M.)
Title: Current Concepts in Psychosomatic Medicine
Speaker: Robert Pasnau, M.D.

10:30 A.M.-11:00 A.M.—VISIT THE EXHIBITS — VISIT THE EXHIBITS — VISIT THE EXHIBITS
(Coffee is served in the Scientific Exhibit Hall)

11:00 A.M.-11:30 A.M.—CONCURRENT SCIENTIFIC SESSIONS
SECTION I Embassy Room Above Hotel Lobby
Title: Normalcy, As Seen by the Psychiatric Physician
Speaker: Warren Gorman, M.D.
Moderator: T. Richard Gregory, M.D.
SECTION II Room A-1 Convention Center
Title: Use & Abuse of Gamma Globulin
Speaker: Vincent A. Fulginiti, M.D.
Moderator: Philip E. Dew, M.D.

FRIDAY, APRIL 27, 1973

SECTION III Room A-2 Convention Center
Title: Implications of the Australia Antigen Assays
Speaker: Gary L. Gitnick, M.D.
Moderator: Thomas Henry, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Obstructive Uropathy in Infants
Speakers: Melvin L. Cohen, M.D.
David S. Trump, M.D.
Moderator: John J. Standifer, M.D.

11:30 A.M.-12 Noon—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: Changing Concepts of Psychiatric Problems in the Aged, with Implications for Diagnosis & Management
Speakers: Jacob D. Hoogerbeets, M.D.
John S. LaWall, M.D.
Moderator: T. Richard Gregory, M.D.

SECTION II Room A-1 Convention Center
Title: Evaluation of the Child with Proteinuria & Mematuria
Speaker: Fred G. Smith, Jr., M.D.
Moderator: Philip E. Dew, M.D.

SECTION III Room A-2 Convention Center
Title: Giardiasis as a Cause of Recurrent Diarrhea
Speakers: Michael L. Epstein, M.D.
Sam L. Mortimer, M.D.
Moderator: Thomas Henry, M.D.

SECTION IV Directors Room Above Hotel Lobby
Title: Atherosclerosis in the Pediatric Age Group
Speaker: Glenn M. Friedman, M.D.
Moderator: John J. Standifer, M.D.

12 Noon-2:00 P.M.—SPECIALTY SOCIETY LUNCHEONS

American College of Emergency Physicians French Quarter Room No. 3
Arizona Society of Pediatrics French Quarter Room No. 2
Arizona Chapter, American College of Surgeons French Quarter Room No. 1
Arizona Urologic Society Lanai Room
Phoenix Foundation for Rheumatic Disease Research Kudu Room
Speaker: Randolf C. Blodgett, Jr., M.D.
President, American Society of Rheumatology
"Systemic Complications of Rheumatoid Arthritis With Special Reference to Rheumatoid Lung Disease and its Treatment"
(Tickets required)

2:00 P.M.-2:30 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: Secondary Gain, Everybody's Cop-Out
Speaker: R. D. Martin, M.D.
Moderator: Vincent A. Fulginiti, M.D.

SECTION II Room A-1 Convention Center
(Presentation starts at 2 P.M. — Ends 3:00 P.M.)
Title: Malignancy of the Urinary Tract with Particular Focus on Cancer of the Bladder & Prostate
Speaker: Donald Skinner, M.D.
Moderator: J. Garland Wood, Jr., M.D.

SECTION III Room A-2 Convention Center
Title: Disseminated Coccidioidomycosis
Speaker: David Rifkind, M.D.
Moderator: James M. Hurley, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 2 P.M. — Ends 3 P.M.)
Title: Psychotherapy Versus Behavior Modification
Speaker: Edward R. Ritvo, M.D.

2:30 P.M.-3:00 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I Embassy Room Above Hotel Lobby
Title: A review of Psychotropic Medications and Their Use in General Medical Practice
Speaker: Stephen C. Scheiber, M.D.
Moderator: Vincent A. Fulginiti, M.D.

SECTION II Room A-1 Convention Center
(Presentation starts at 2 P.M. — Ends 3 P.M.)
Title: Malignancy of the Urinary Tract with Particular Focus on Cancer of the Bladder & Prostate
Speaker: Donald Skinner, M.D.
Moderator: J. Garland Wood, Jr., M.D.

SECTION III Room A-2 Convention Center
Title: Reappraisal of the Management of Pulmonary Nodules
Speaker: M. H. Nathan, M.D.
Moderator: James M. Hurley, M.D.

SECTION IV — WORKSHOP Directors Room Above Hotel Lobby

FRIDAY, APRIL 27, 1973

(Workshop starts at 2 P.M. – Ends 3 P.M.
Title: Psychotherapy Versus Behavior Modifications
Speaker: Edward R. Ritvo, M.D.

3:00 P.M.-3:30 P.M.—VISIT THE EXHIBITS – VISIT THE EXHIBITS – VISIT THE EXHIBITS
(Coffee is served in the Scientific Exhibit Hall)

3:30 P.M.-4:00 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I – WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Hepatitis – Acute & Chronic
Speaker: Gary L. Gitnick, M.D.

SECTION II Room A-1 Convention Center
Title: Care of the Eschemic Diabetic Extremity
Speaker: John Max Johnson, M.D.
Moderator: Milton S. Dworin, M.D.

SECTION III Room A-2 Convention Center
(Presentation starts at 3:30 P.M. – Ends 5 P.M.)
Title: Problem Oriented Medical Record
Speakers: L. L. Fairbanks, M.D.
Stephen C. Scheiber, M.D.
Ted J. Stuart, M.D.

SECTION IV – WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Part I Management of Patients with Genitourinary Malignancy
Speakers: George W. Drach, M.D.
Donald Skinner, M.D.
Moderator: Richard Ehrlich, M.D.
Title: Part II Malignancy of the Genitourinary System in Childhood
Speakers: Richard Ehrlich, M.D.
Donald Skinner, M.D.
Fred G. Smith, Jr., M.D.
Moderator: George W. Drach, M.D.

4:00 P.M.-4:30 P.M.—CONCURRENT SCIENTIFIC SESSIONS

SECTION I – WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Hepatitis – Acute & Chronic
Speaker: Gary L. Gitnick, M.D.

SECTION II Room A-1 Convention Center
Title: Nephrogenic Diabetes Insipidus Secondary to Declomycin
Speaker: E. Eugene Miller, M.D.
Moderator: Milton S. Dworin, M.D.

SECTION III Room A-2 Convention Center
(Presentation starts at 3:30 P.M. – Ends 5 P.M.)
Title: Problem Oriented Medical Record
Speakers: L. L. Fairbanks, M.D.
Stephen C. Scheiber, M.D.
Ted J. Stuart, M.D.

SECTION IV – WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Part I Management of Patients with Genitourinary Malignancy
Speakers: George W. Draeh, M.D.
Donald Skinner, M.D.
Moderator: Richard Ehrlich, M.D.
Title: Part II Malignancy of the Genitourinary System in Childhood
Speakers: Richard Ehrlich, M.D.
Donald Skinner, M.D.
Fred G. Smith, Jr., M.D.
Moderator: George W. Drach, M.D.

4:30 P.M.-5:00 P.M.—SECTION I – WORKSHOP Embassy Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Hepatitis – Acute & Chronic
Speaker: Gary L. Gitnick, M.D.

SECTION II Room A-1 Convention Center
Title: Bone Scanning for the Clinician
Speaker: Robert E. O'Mara, M.D.
Moderator: Milton S. Dworin, M.D.

SECTION III Room A-2 Convention Center
(Presentation starts at 3:30 P.M. – Ends 5 P.M.)
Title: Problem Oriented Medical Record
Speakers: L. L. Fairbanks, M.D.
Stephen C. Scheiber, M.D.
Ted J. Stuart, M.D.

SECTION IV – WORKSHOP Directors Room Above Hotel Lobby
(Workshop starts at 3:30 P.M. – Ends 5 P.M.)
Title: Part I Management of Patients with Genitourinary Malignancy
Speakers: George W. Drach, M.D.
Donald Skinner, M.D.

FRIDAY, APRIL 27, 1973

Moderator: Richard Ehrlich, M.D.
Title: Part II Malignancy of the Genitournary System in Childhood
Speakers: Richard Ehrlich, M.D.
Donald Skinner, M.D.
Fred G. Smith, Jr., M.D.
Moderator: George W. Drach, M.D.

7:00 P.M.—PRESIDENT'S RECEPTION North Poolside
(no host)

8:00 P.M.—PRESIDENT'S BANQUET Convention Center
(admission by ticket only)
Speaker: Russell B. Roth, M.D.
President-Elect, American Medical Association

SATURDAY, APRIL 28, 1973

8:00 A.M.—HOUSE OF DELEGATES — Second Session Convention Center
to be followed by
BLUE SHIELD CORPORATE BODY MEETING — Second Session

12 Noon—ArMA Board of Directors Meeting and Luncheon Kudu Room

12 Noon—SPECIAL SOCIETY LUNCHEONS
Arizona Society of Pathologists Lanai Room
Arizona Psychiatric Society French Quarter Room No. 1

Approved for thirteen and one-half hours required credit for ArMA Certificate in Continuing Medical Education and thirteen and one-half hours elective credit by the American Academy of Family Practice.

SPECIAL IN-DEPTH WORKSHOPS

Attendance at the following workshops is limited. Advance registration is required. Admittance by ticket only. First come, first served.

EMERGENCY CARE AND THE EMERGENCY PHYSICIAN
Thursday, April 26 — 9:00 A.M.
Embassy Room Above Hotel Lobby

MANAGEMENT OF EARLY BREAST CANCER
Thursday, April 26 — 11:00 A.M.
Directors Room Above Hotel Lobby

HEAD AND NECK NEOPLASMS
Thursday, April 26 — 2:00 P.M.
Embassy Room Above Hotel Lobby

CONTEMPORARY ISSUES IN PERMANENT CONTRACEPTION (STERILIZATION)
Thursday, April 26 — 2:00 P.M.
Room A2, Convention Center

INDICATIONS AND RESULTS OF TOTAL HIP JOINT REPLACEMENT
Thursday, April 26 — 3:30 P.M.
Directors Room Above Hotel Lobby

CURRENT CONCEPTS IN PSYCHOSOMATIC MEDICINE
Friday, April 27 — 9:00 A.M.
Directors Room Above Hotel Lobby

DIET, CHOLESTEROL, LIPOPROTEIN AND HEART DISEASE
Friday, April 27 — 9:00 A.M.
Embassy Room Above Hotel Lobby

PSYCHOTHERAPY VERSUS BEHAVIOR MODIFICATION
Friday, April 27 — 2:00 P.M.
Directors Room Above Hotel Lobby

MANAGEMENT OF PATIENTS WITH GENITOURINARY MALIGNANCY and MALIGNANCY OF THE GENITOURINARY SYSTEM IN CHILDHOOD
Friday, April 27 — 3:30 P.M.
Directors Room Above Hotel Lobby

HEPATITIS — ACUTE AND CHRONIC
Friday, April 27 — 3:30 P.M.
Embassy Room Above Hotel Lobby

PAUL H. ANDREINE, M.D.
Internal Medicine, Mayo Clinic
Rochester, Minn.
GEORGE BRAY, M.D.
Associate Professor of Medicine in Residence
UCLA
DONALD BRAYTON, M.D.
Chairman, Postgraduate Education & Community Medical Program: Regional Medical Program Area IV Director; Clinical Professor Surgery
UCLA
JAMES BRILL, M.D.
Assistant Professor of Surgery/Urology
UCLA
DAVID D. COHEN, M.D.
Clinical Associate Professor of Anesthesia
UCLA
I. M. CUSHNER, M.D.
Assistant Professor of Obstetrics & Gynecology
UCLA
GEORGE W. DRACH, M.D.
Assistant Professor, Surgery
Tucson
ROBERT M. DRYDEN, M.D.
Tucson
DONALD DUBOIS, D.P.H.
California Medical Plan
UCLA
JOHN C. DUFFY, M.D.
Tucson
JOSEPH A. DUPONT, M.D.
Phoenix
RICHARD EHRLICH, M.D.
Assistant Professor of Surgery/Urology
UCLA
MICHAEL L. EPSTEIN, M.D.
Resident
Tucson
LELAND L. FAIRBANKS, M.D.
Phoenix Indian Medical Center
Phoenix
GERALD FINERMAN, M.D.
Assistant Professor Surgery/Orthopedic
UCLA
GLENN M. FRIEDMAN, M.D.
Scottsdale
VINCENT A. FULGINITI, M.D.
Professor, Pediatrics
Tucson
GARY L. GITNICK, M.D.
Assistant Professor of Medicine/ Gastroenterology
UCLA
WARREN F. GORMAN, M.D.
Scottsdale
ALLAN HARRIS
Regional Program Director, Regional Medical Program, Region IX
HEW
RALPH H. HENDERSON, M.D.
Assistant Chief, Venereal Disease Branch, Atlanta, Georgia
JACOB D. HOOGERBEETS, M.D.
Associate Professor, Psychiatry
Tucson
JOHN MAX JOHNSON, M.D.
Phoenix
MARK M. KARTCHNER, M.D.
Associate in Surgery
Tucson
LEO LAGASSE, M.D.
Associate Professor Obstetrics & Gynecology
UCLA
DOUGLAS S. KELLOGG, Ph.D.
Chief, Venereal Disease Research Section
Atlanta, Georgia
PHILIP LEVY, M.D.
Phoenix
CHARLES LEWIS, M.D.
Professor of Medicine & Public Health
UCLA
LAURENCE M. LINKNER, M.D.
Phoenix
HERBERT MACHLEDER, M.D.
Assistant Professor of Surgery
UCLA
R. D. MARTIN, M.D.
Chief, Psychiatry Service, VA Hospital
Tucson

MARCUS D. McDIVETT, M.D.
Tucson

JACK O. McFARLAND, M.D.
Scottsdale

FRED MECKLENBURG, M.D.
Obstetrics/Gynecology;
Director, Planned Parenthood
Minneapolis, Minn.

E. EUGENE MILLER, M.D.
Phoenix

M. HERBERT NATHAN, M.D.
Scottsdale

PAUL J. NICHOLS, M.D.
Phoenix

ROBERT E. O'MARA, M.D.
Dept. Radiology, Director Nuclear Medicine
Tucson

DONALD OSTERGARD, M.D.
Assistant Professor of Obstetrics &
Gynecology in Residence
Harbor General Hospital
UCLA

ROBERT PASNAU, M.D.
Assistant Professor of Psychiatry in
Residence
UCLA

LEONARD F. PELTIER, M.D., Ph.D.
Professor, Surgery
Tucson

YOSEF PILCH, M.D.
Assistant Professor of Surgery in Residence/
Oncology
UCLA

WILFRED M. POTTER, M.D.
Scottsdale

WALLACE A. REED, M.D.
Phoenix

WILLIAM A. RENERT, M.D.
Assistant Professor, Dept. of Radiology
Tucson

DAVID RIFKIND, M.D., Ph.D.
Professor, Microbiology & Internal Medicine
Tucson

EDWARD RITVO, M.D.
Associate Professor of Psychiatry in
Residence
UCLA

SANFORD H. ROTH, M.D.
Phoenix

CHARLES M. RUCKER, M.D.
Phoenix

DONALD F. SCHALLER, M.D.
Phoenix

JAMES L. SCHAMADAN, M.D.
Phoenix

STEPHEN C. SCHEIBER, M.D.
Assistant Professor, Psychiatry
Tucson

JOHN R. SCHWARTZMANN, M.D.
Tucson

ROBERT C. SHAPIRO, M.D.
Phoenix

DONALD SKINNER, M.D.
Assistant Professor, Surgery/Urology
UCLA

FRED G. SMITH, JR., M.D.
Professor, Pediatrics/Nephrology
UCLA

LAWRENCE Z. STERN, M.D.
Assistant Professor, Neurology
Tucson

TED J. STUART, JR., M.D.
Phoenix

ROBERT H. TAMIS, M.D.
Phoenix

H. STEPHENS THOMAS, M.D.
Phoenix

HUGH C. THOMPSON, M.D.
Professor, Community Medicine
Tucson

DAVID S. TRUMP, M.D.
Phoenix

JAIME C. VARGAS, M.D.
Tucson

PAUL WARD, M.D.
Professor, Surgery, Chief Head & Neck
Division
UCLA

RICHARD H. WOHL, M.D.
Phoenix

LONNIE K. ZELTZER, M.D.
Dept. Pediatrics
Tucson

GUEST SPEAKERS

WOMEN'S AUXILIARY
to
THE ARIZONA MEDICAL ASSOCIATION

YOUR PRESIDENTS



Mrs. Thomas B. Jarvis
1973-74



Mrs. Charles I. Fisher
1972-73

HIGHLIGHTS
WOMEN'S AUXILIARY MEDICAL CONVENTION SCHEDULE
TUESDAY, APRIL 24, 1973 THROUGH FRIDAY, APRIL 27, 1973

REGISTRATION HOURS Lobby Safari Convention Center
9 a.m. to 4 p.m. — Wednesday
9 a.m. to 4 p.m. — Thursday
9 a.m. to 12 Noon — Friday

HOSPITALITY CENTER Exhibit Hall (next to Arts & Crafts Show)
9 a.m. to 4 p.m. — Wednesday
9 a.m. to 4 p.m. — Thursday
9 a.m. to 12 Noon — Friday

ARTS & CRAFTS SHOW Exhibit Hall Room A-3
1 p.m. to 5:30 p.m. — Tuesday
9 a.m. to 12 Noon — Wednesday
9 a.m. to 5 p.m. — Thursday
9 a.m. to 12 Noon — Friday

AMA-ERF BOOTH Lobby Convention Center (next to Registration)

MINI-WORKSHOP, SNACK LUNCH & BUS TOUR OF
SOUTHWESTERN STUDIO Scottsdale Hilton — Baja Room
10:30 a.m. to 4:30 p.m. — Thursday

LUNCHEON Scottsdale Hilton — Room—Sonora Ballroom A
12 Noon — Cocktails
12:30 p.m. — Luncheon

SPECIAL GUESTS FOR CONVENTION!
Mrs. Robert Beckley, National Auxiliary President
Wednesday evening — Thursday meetings
Mrs. Lee Rice, National Auxiliary Director
Thursday evening — Friday meeting

CONVENTION SCHEDULE

43rd ANNUAL MEETING

YOUR CONVENTION CHAIRMAN

Mrs. Ray Fife

TUESDAY, APRIL 24, 1973

1:00 P.M.-5:30 P.M.—Arts & Crafts show Safari Hotel Room A3 Convention Center

WEDNESDAY, APRIL 25, 1973

9:00 A.M.-4:00 P.M.—Registration Safari Hotel Lobby Convention Center
Hospitality Center Safari Hotel Exhibit Hall (next to Arts & Crafts Show)
9:00 A.M.-12 Noon—Arts & Crafts Show Safari Hotel Exhibit Hall, Room A3
AMA-ERF Booth Safari Hotel Lobby Convention Center (next to Registration)
2:00 P.M.-3:00 P.M.—SPECIAL MEETINGS:
1972-1973 Executive Committee Scottsdale Hilton Hotel Room C-3
Hamer Education Loan Fund Scottsdale Hilton Hotel Room C-3
1972-1973 Nominating Committee Safari Hotel (room to be designated)
7:00 P.M.-8:00 P.M.—Annual Reception Safari Hotel North Poolside
8:00 P.M.—Annual Steak Fry North Poolside Lawn
Dress: Western or Casual

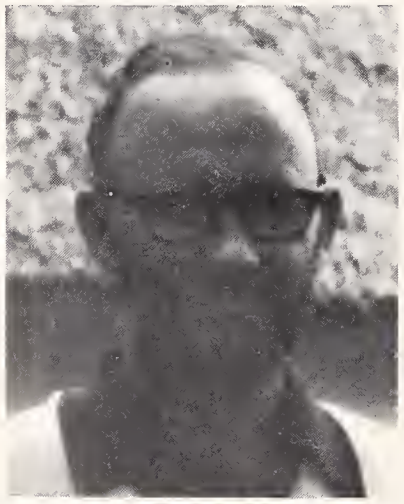
THURSDAY, APRIL 26, 1973

8:30 A.M.-9:15 A.M.—BREAKFAST & BOARD MEETING (Continental Breakfast) Scottsdale Hilton Hotel Baja Room
In attendance all 1972-73:
State Officers
State Committee Chairmen and Co-Chairmen
Members of State Nominating Committee
9:00 A.M.-5:00 P.M.—Arts & Crafts Show Safari Hotel Exhibit Hall Room A3
9:00 A.M.-4:00 P.M.—Registration Safari Hotel Lobby Convention Center
Hospitality Room Exhibit Hall Convention Center
9:15 A.M.-10:30 A.M.—FIRST GENERAL SESSION Scottsdale Hilton Hotel Baja Room
All auxiliary members are invited and urged to attend.
Included in Agenda: Election of Officers
IMMEDIATELY FOLLOWING the First General Session there will be a meeting of the:
1973-1974 Executive Committee Scottsdale Hilton Hotel Room C-3
1973-1974 Nominating Committee Scottsdale Hilton Hotel Room C-3
These meetings a maximum of 15 minutes.
10:45 A.M.-1:00 P.M.—MINI-WORKSHOP Scottsdale Hilton Hotel Baja Room
SPECIAL GUEST: Mrs. Robert Beckley, National Auxiliary President
In attendance:
All committee chairmen 1972-1973 (co-chairmen, please, too)
All committee chairmen 1973-1974 (co-chairmen, please, too)
All members extremely welcome, especially members-at-large
1:00 P.M.-4:00 P.M.—Guided Bus Tour:
Southwestern Productions (movie location)
Carefree and surrounding areas
7:00 P.M.-8:00 P.M.—ArMPAC Annual Reception Safari Hotel Convention Center
8:00 P.M.—ArMPAC Annual Dinner Safari Hotel Convention Center

FRIDAY, APRIL 27, 1973

8:30 A.M.-9:30 A.M.—CONTINENTAL BREAKFAST (complimentary) Scottsdale Hilton Hotel Baja Room
In attendance:
Incoming and Outgoing Board Members
All auxiliary members are very welcome to join in!
9:00 A.M.-12:00 Noon—Hospitality Room Safari Hotel Exhibit Hall
Registration Lobby Convention Center
Arts & Crafts Show Exhibit Hall Room A3
9:30 A.M.-11:00 A.M.—SECOND GENERAL SESSION Scottsdale Hilton Hotel Baja Room
Included in agenda:
Memorial Hour — Mrs. James Fuzzell, Chaplain
Address — Mrs. Lee Rice, National Officer
President's Report — Mrs. Charles Fisher
Installation of Officers — Mrs. Lee Rice
Acceptance — Mrs. Thomas Jarvis
Adjournament of 43rd Annual Meeting
12:00 Noon—IMMEDIATELY FOLLOWING —
POST CONVENTION Board Meeting, 1973-1974 Board .. Scottsdale Hilton Hotel Room C-3
Luncheon: Mrs. Thomas Jarvis, presiding Scottsdale Hilton Hotel Sonora Ballroom A
Chairman: Mrs. George Scharf
Invocation: Mrs. James Fuzzell, Chaplain
Program: Philosophy of Yoga by Brigitta
7:00 P.M.—President's Reception Safari Hotel Convention Center
8:00 P.M.—President's Banquet Safari Hotel Convention Center
Speaker: Russell B. Roth, M.D.
President-Elect, American Medical Association

In Memoriam



DONALD E. MATTHIESEN, M.D.
1918 - 1972

Don Matthiesen had a wide range of interests and was an outstanding traveler. He loved natures by-ways and outdoor activities. His first coronary attack occurred a year ago as he was descending from Mount Kilimanjaro. Nevertheless, he was soon back at his usual work at St. Joseph's Hospital.

He succumbed to a second attack while on a fishing vacation in Wyoming. He is survived by his wife Betty, daughter Liz and sons Bill and Rob.

Don, a radiologist at St. Josephs Hospital, earned his M.D. from Temple University in 1944. He was a diplomate of the American Board of Radiology and a Fellow in the American College of Radiology. He was a lieutenant in the Marine Corps and later in the U.S. Naval Reserves.

A weekly clinical club meeting. The doctors trickle in. They chat quietly with ane another about various and sundry matters as they have their lunch. It's a subdued meeting.

At the usual time one of the two prepared discussants rises and proceeds to present the assigned case. The other scheduled discussant is absent. It's Don.

The speaker completes the history and course, and comes to the analysis and differential diagnosis. He comments on his lack of qualifications. The problem involves a specialty other than his own.

He mentions Don's keen knowledge. How Don might have come up with a more scholarly discussion. His voice breaks — a little. He chokes, smothering a few sobs — struggles on — gets back into the clinical discourse and recovers his poise. Completes his presentation with his final diagnostic conclusions.

Then, as is our custom the rest of us, each in his turn, submits any further comments he may have. The comments are all strictly clinical. One makes an awkward attempt to mention Don. Results: inarticulate phrases. Useless inadequate words.

Soon the meeting ends and we all return to our office routines.

Don was our friend. We knew a boyish smile, a quiet man. Perceptive. Reliable. Competent. A friendly man, always ready to respond. A mild man who never bragged, never dominated, never griped or scoffed. There was a quiet warmth, a humality without servility. Modesty without self-consciousness. Reserve without constraint.

I think most of us don't know each other too intimately. We secretly wish for intimacy— but avoid it. We have acquaintances, call them friends, but fear closeness. Then it's suddenly too late.

All of us liked Don, respected him and I think loved him.

Now we miss him too much to talk about it.



LOY G. ROBERTS
1924 - 1972

Loy Roberts passed away peacefully in his sleep on December 19, 1972, presumably of ventricular tachycardia. His completely unexpected demise has been a shocking loss to his many friends, patients, and to his medical associates and colleagues. Most especially, of course, the loss has been felt by his very close family; Lee, his wife; and four children Leisel, Loy, Mark, and Raymond. Loy's devotion and affection for his family was one of his most outstanding personal traits.

Loy was born on January 20, 1924 in Griffin, Arkansas. During the Second World War he was a Navy fighter pilot. Following his service he graduated from Tulane Medical School in New Orleans. He interned at St. Joseph Hospital in Phoenix. Following internship he entered practice with Dr. Philip Rice and Dr. Robert Easley in Glendale where he remained. He was very active in his church, the First Baptist Church of Glendale where he was a deacon and a teacher. He was on the Board of the Southwestern Bible College of Phoenix. He was active in the PTA and the Arizona Wild Life Association.

Loy was an avid outdoorsman, a trophy hunter and fisherman. His recreational time was largely spent in these pursuits with his friends and family.

These are the facts of Loy Roberts life. The facts do not explain the sort of person Loy was — a physician in all the best sense of the art.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

POLLUTION CONTROL COMMITTEE SECTION ON PUBLIC HEALTH

Meeting of the Pollution Control Committee of the Section on Public Health, Professional Committee, of this Association, held Sunday, February 4, 1973, at 810 West Bethany Home Road, Phoenix, Arizona, convened at 10:18 a.m., Kent E. Durfee, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting held January 7, 1973 were approved as distributed.

CONFERENCE ON ARIZONA ENVIRONMENT

Drs. Durfee and Goodwin reported to the Committee that they had met with Mr. F. J. "Mac" MacDonald, Chairman, Governor's Advisory Committee on Arizona Environment, on January 12th, and with Mr. Dave Calkins, Air and Water Planning Director, Federal Environmental Protection Agency, San Francisco, on Tuesday, January 16th, as requested during meeting held January 7, 1973.

It was reported that the Governor's Advisory Committee on Arizona Environment was receptive to a conference on Arizona environment where the primary purpose may be to develop policy concerning environmental health. It was also reported that the discussions with the representative of EPA was successful, as they

offered to assist with a conference with manpower for both organization and speakers, as well as possible financial support in setting up the workshop.

Dr. Goodwin introduced Dave Hancock, Environmental Consultant, Arizona Health Planning Authority, recently employed through June 30, 1973 to provide part of the staff work on the environmental health issues of the conference.

It was determined that a steering committee must be formed to develop the objectives, content, speakers, and special subjects to be discussed, as well as the arrangements and logistics of such a conference. Further, that the steering committee would be representative of the Arizona Health Planning Authority, Arizona Medical Association, and the Governor's Advisory Committee on Arizona Environment. Dr. Durfee will appoint representation to the steering committee.

COMMITTEE MEMBERSHIP

Concern was voiced regarding the attendance of Committee members to meetings and the involvement of county medical societies. It was determined that the Association write to each county president and secretary requesting greater involvement in pollution control at both the state association level and the local level.

LEGISLATION

Senate Bill 1070 — Pollution Control Permits

The Legislative Committee during meeting held January 21, 1972 referred Senate Bill 1070 to the Pollution Control Committee for consideration. This legislation is proposed by the Arizona State Department of Health to permit consideration of the impact of air pollution of a new source or modification of an existing source and provides the State Department of Health the authority to present evidence to transportation agencies on the effect of any action by such agency in the maintenance of ambient air quality standards.

It was moved and carried to recommend to the Legislative Committee general support of Senate Bill 1070.

Senate Bill 1069 — Monitoring Water Pollution

The Legislative Committee during meeting held January 21, 1973 referred Senate Bill 1069 to the Pollution Control Committee for recommendation. Senate Bill 1069 authorizes the Department of Health to require monitoring of water pollution sources by the source of pollution and provides for confidentiality of records unique to the owner or operator of the source of pollution.

It was moved and carried to recommend to the Legislative Committee general support of Senate Bill 1069.

Meeting adjourned 11:50 a.m.

Kent E. Durfee, M.D., Chairman
Pollution Control Committee

ARTICLES OF INCORPORATION AND BYLAWS COMMITTEE

Meeting of the Artieles of Incorporation and Bylaws Committee of the Arizona Medical Assoeiation, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, Saturday, January 6, 1973, convened at 1:43 p.m., Charles E. Henderson, M.D., Chairman, presiding.

MINUTES

Minutes of the meeting held 12/13/70 were approved as distributed.

INTERN & RESIDENT ACTIVE MEMBERSHIP

It was moved and carried to recommend the following resolution to the Board of Directors for approval and submission to the House of Delegates at its next meeting:

RESOLVED, That Chapter II — Membership, Section 3. — Classes of Membership — (A) Active Members — be amended to read:

All active members of all the county societies shall be active members of this Association. The minimum qualifications for active membership (OTHER THAN FOR INTERNS AND RESIDENTS) in a county society shall be that the individual must (1) hold the degree of doctor of medicine or its equivalent or doctor of osteopathy, (2) be an American citizen, or have made application for American Citizenship papers (in which ease, he must make reasonable progress toward full eitizenship or his membership shall lapse), (3) hold an unrevoked license to practice medicine and surgery or osteopathic medicine and surgery in the State of Arizona, and (4) be a legal resident of the State of Arizona, (5) fulfill the continuing medical education requirements of the Arizona Medical Association. Subject to these minimum qualifications and to the provisions for loss of membership (Chapter II, Section 4), each county society shall be the exelusive judge of the qualifications of its members. INTERNS AND RESIDENTS WHO ARE LICENSED OR REGISTERED WITH THE BOARD OF MEDICAL EXAMINERS, STATE OF ARIZONA, ARE ELIGIBLE FOR ACTIVE MEMBERSHIP IN A COUNTY SOCIETY.

Rights. An active member shall have all the rights and privileges of the Association as herein provided. INTERN AND RESIDENT ACTIVE MEMBERS SHALL PAY ONE TENTH THE DUES OF OTHER ACTIVE MEMBERS BUT WILL BE EXEMPTED FROM SPECIAL ASSESSMENTS: and be it further

RESOLVED, That Chapter II — Membership, Section 3, Classes of Membership — (C) Associate Members — be amended to read:

Associate members may be elected by the Board, upon recommendation of the society of the county in which such members reside, from those doctors of medicine or osteopathy, who are licensed to practice medicine and surgery or osteopathic medicine and surgery in Arizona, but are (1) disabled and unable to practiee, (2) retired from aetive practice and not eligible for Fifty-Year Club membership, (3) aetive members who leave practiee to undergo a further training period lasting six months or more, or for military serviee [*or (4) interns and residents who are participating in an approved internship or residency program in the State of Arizona.*] and be it further

RESOLVED, That Chapter II — Membership, Section 4. Loss of Membership. (A) be amended to read:

(A) Active, Assoeiate or Fifty-Year Club membership in this Association shall be lost by:

(i) Final expulsion from the county society through which he is an active member of the Association.

(ii) Transfer of membership to a county society of another state, and thereby to another state association, except as provided in Chapter III, Section 3.

(iii) Voluntary resignation, which shall be without prejudice.

(iv) Action of the House of Delegates (see Chapter VI, Section 6; Chapter VIII, Section 9).

(v) Revocation of the member's license to practice in Arizona. This latter clause shall effect immediate loss of membership as of the date of revocation.

(vi) **Termination of Board of Medical Examiners registration of intern or resident active member. This latter clause shall take effect at the end of the calendar year.**

[vi] (vii) Failure to mtain membership in good standing in the American Medical Association.

[vii] (viii) Failure to pay Association dues and assessments within one year of the date such become payable, unless such failure be exempted under Chapter IX, Section 5.

[viii] (ix) For active membership, failure to fulfill the continuing medical edueation requirements of the Arizona Medical Association elsewhere in the bylaws; and be it further

RESOLVED, That Chapter IX — Dues and Assessments Section 4. Equality Within Membership Categories of Dues and Assessments — be amended to read:

While the amount of dues or special assessments may vary as between classifications of membership (except as to certain classes upon which none may be levied as provided in subsection 5 hereof), they shall be uniform within each classification, **except for intern and resident active members (see Chapter II, Section 3).**

Note: All bracketed, italicized words represent deletions; all fully capitalized words are new material.

SERVICE MEMBERSHIP CLASSIFICATION

Discussion ensued on the subject of altering the Bylaws to make it possible for Service members to have full rights and privileges of Active members.

It was moved and carried to take no action on this matter at this time.

CONFLICT IN THE BYLAWS

A member of the Association raised the question that there may be a conflict between Chapter VII, Section 3, and Chapter VII, Section 4 — Paragraph (N) Scientific Assembly, in that these two sections refer to two different time periods.

The Committee determined that a conflict does not exist.

Meeting adjourned 2:26 p.m.

Edward Sattenspiel, M.D.
Secretary

FINANCE COMMITTEE

The meeting of the Finance Committee of the Arizona Medical Association, Inc. held at 2555 E. Adams St., Tucson, Arizona, Saturday, January 20, 1973, convened at 1:10 p.m., William C. Scott, M.D., Treasurer and Chairman, presiding.

MINUTES

The minutes of the meeting held September 16, 1972, were approved as distributed.

BUILDING FUND RECAP

Mr. Robinson reviewed the history of the Building Fund, as follows:

Resolution #6 passed by the House of Delegates on April 27, 1968, established the building program. At that time there were 1372 "active" members. Cash anticipated from the assessment at that time was $17,500.00 ($125.00 x 1372).

Record of Cash Received Since 4/27/68

1968	$103,385.00
1969	20,582.50
1970	23,030.00
1971	23,682.50
1972	25,140.00
Total cash received 4/27/68 thru 12/31/72	$195,820.00
Gross cost of Building at 12/31/72	367,184.87
Difference	$171,364.87
Building Fund assessment outstanding at 12/31/72	$ 62,440.00

610 members were billed for partial payment as of 9/1/72 (annual billing date).

Pattern of payments made by new members during 1972:

92 paid	$125.00	= $11,500.00	— 42%
127 paid	15.00*	= 1,925.00	— 58%
219		$13,425.00	100%

*a few payments were made for amounts more than $15, but less than $125.

Dr. Shapiro pointed out that in less than three years we have in excess of a 50% equity in the building, which is excellent.

PRESIDENT'S EXPENSE

It was moved and carried to recommend to the Board of Directors that the President's expenses be paid to attend both American Medical Association yearly meetings, and in addition, an amount not to exceed $5,000.00 be budgeted for the President's other expenses.

1974 BUDGET

It was moved and carried to recommend to the Board of Directors that the following 1974 budget be approved for submission to the next House of Delegates meeting:

	Income	*Expend.*	*Conting.*
General Operations	$222,500	$207,200	$15,300
Committee Operations	3,000	33,940	(30,940)
Annual Meeting	38,900	33,660	5,240
Publishing Operations	61,880	54,000	7,880
Building Operations	31,400	23,500	7,900
Benevolent & Loan	600.00	500	100
TOTAL	$358,280	$352,800	$ 5,480

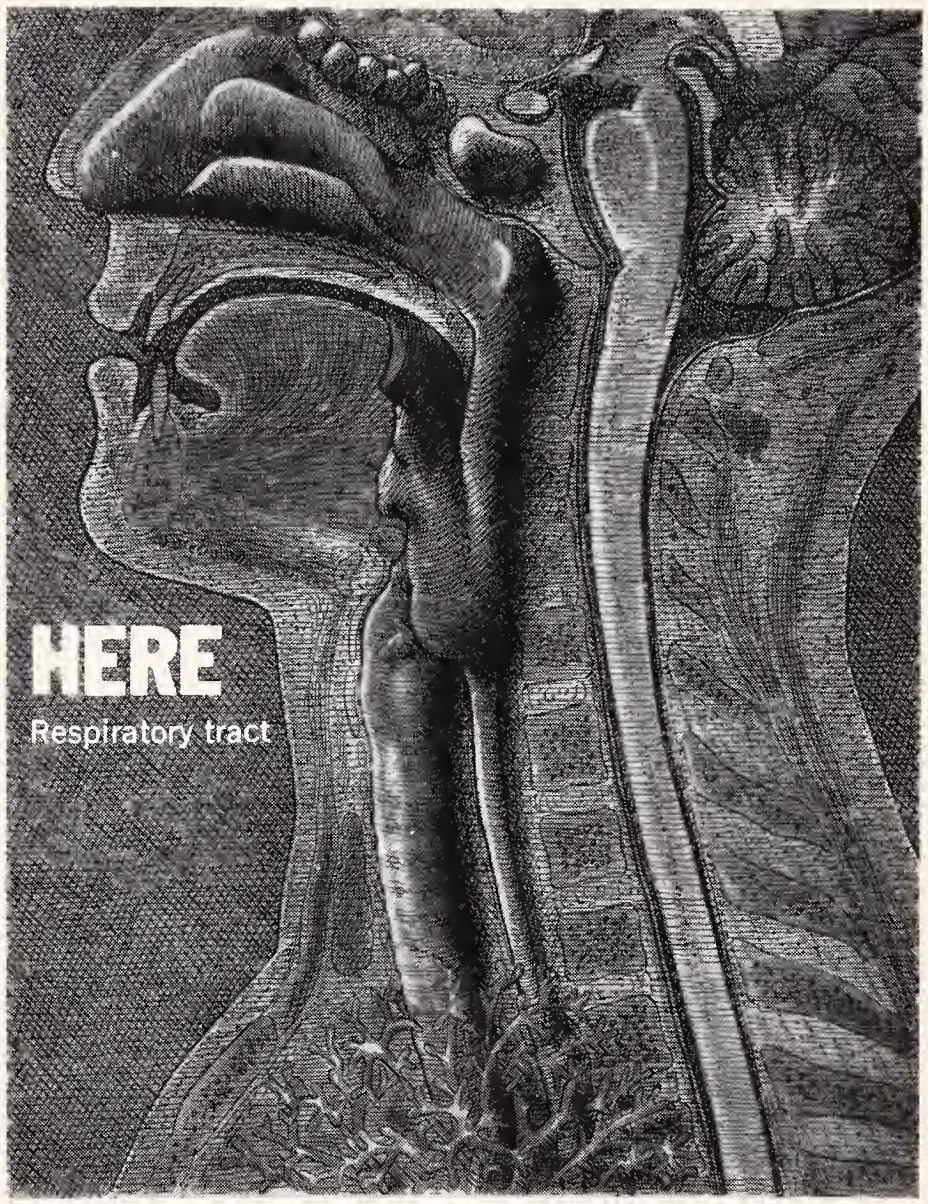
SAMA

Mr. Robinson reported that the Board of Directors has approved the committee's recommendation that $200.00 per year be allotted to SAMA.

Meeting adjourned 3:20 p.m.

Edward Sattenspiel, M.D.
Secretary
Bruce E. Robinson
Executive Director

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ARTS AND CRAFTS SHOW
1973 STATE MEDICAL CONVENTION

The Arts and Crafts Show, a popular event at the Annual State Convention, will be held the last week in April at the Safari Hotel in Scottsdale. Entries in past years have included oil paintings, water colors, acrylics, charcoals, collages, photography, graphics, ceramics, carvings, sculptures, needlecraft, macrame, bead work, papier mache, and jewelry.

This show, sponsored by the Arizona Medical Associations Woman's Auxiliary, will have exhibits on display from April 25 to April 27th. Awards will be presented to those entries considered to be most deserving.

The rules for entering are:

1. Only works not previously shown in this show are eligible for exhibition.

2. There will be no more than three exhibits per person.

3. All auxiliary members and their husbands are eligible.

4. Entries must be delivered to the Convention Center of the Safari Hotel between 1:00 P.M. and 5:30 P.M. on Tuesday, April 24, and picked up between 9:30 A.M. and 11:00 A.M. on Friday, April 27.

5. Paintings and photographs should have hooks and wires on the back to make them ready to hang.

6. Entry blanks must be sent to county representatives by April 18. (It is essential that all entry blanks be received by that date to insure adequate display space).

Following is a list of the representatives who will assist participants in the entering of their exhibits.

MARICOPA COUNTY
Mrs. Sidney Stovall (Irene)
8215 North 11th Avenue
Phoenix, Arizona 85021
Phone: 955-8046

YUMA COUNTY
Mrs. Dale Webb (Lynn)
2200 East 25th Place
Yuma, Arizona 85364
Phone: 726-8744

GILA COUNTY
Mrs. Lawrence Bailey (Mary Ann)
703 Oak
Globe, Arizona 85501
Phone: 425-4591

PIMA COUNTY
Mrs. Phillip Derickson (Doris)
445 Via Golondrina
Tucson, Arizona 85716
Phone: 326-1179

YAVAPAI COUNTY
Mrs. Evaristo Martinez (Fran)
1172 Country Club Drive
Prescott, Arizona 86301
Phone: 445-2888

ARTS AND CRAFTS SHOW REGISTRATION FORM

Mrs. Joseph Buxer
1802 E. Rose Lane
Phoenix, Arizona 85016 Telephone: 274-0239

I would like to enter the following items in the Annual Arts and Crafts Show to be held April 25-27, 1973 at the Safari Hotel, Scottsdale, Arizona. Entries are limited to three per person.

Description in detail including size:

.....

.....

.....

.....

I agree to deliver the items ready for display to the Convention Center of the Safari Hotel, Tuesday, April 24, 1973 between 1:00 and 5:30 P.M.

I agree to pick up above items between 9:30 A.M. and 11:00 A.M. on Friday, April 27.

Name:

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Street Address _____

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Signature _____

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CONTRIBUTIONS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Material submitted for publication in ARIZONA MEDICINE should conform to the following policies:

1. Manuscripts, including references or bibliography, should be typewritten, doublespaced, on one side of the paper only, and the original and a carbon enclosed.

2. Be guided by the general rules of medcal writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for ·ication. Every effort will be made to re-·sed manuscripts.

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Indications: The prevention or correction of potassium deficit, particularly when accompanied by hypochloremic alkalosis in conjunction with thiazide diuretic therapy, in digitalis intoxication, or as the result of long-term corticosteroid therapy, low dietary intake of potassium, or excessive vomiting or diarrhea.
Contraindications: Potassium is contraindicated in severe renal impairment involving oliguria, anuria or azotemia; in untreated Addison's disease, adynamia episodica hereditaria, acute dehydration, heat cramps, hyperkalemia from any cause.
Precautions: Kato Powder is a concentrate and should be taken only after reconstituting with water as directed. Do not use in patients with low urinary output or renal decompensation. Administer with caution; it is impossible accurately to assess the extent of potassium depletion, or the daily dose required. Excessive dosage may result in potassium intoxication. Frequent checks of the clinical status of the patient, ECG and/or plasma potassium level should be made. High plasma concentrations of potassium ion may cause death through cardiac depression, arrhythmias or arrest. Use with caution in patients with cardiac disease.
Adverse Reactions: Vomiting, diarrhea, nausea, and abdominal discomfort may occur. Gross overdosage may produce signs and symptoms of potassium intoxication: mental confusion, listlessness, paresthesia of the extremities, weakness and heaviness of legs, flaccid paralysis, hyperkalemia, ECG abnormalities, fall in blood pressure, cardiac arrhythmias and heart block. The characteristic changes in the ECG are disappearance of the P wave, widening and slurring of QRS complex, changes of the S-T segment, tall peaked T waves, etc.
Toxicity: Potassium intoxication may result from overdosage of potassium or from therapeutic dosage in conditions stated under "Contraindications." Hyperkalemia, when detected, must be treated immediately because lethal levels can be reached in a few hours.
Treatment of Hyperkalemia: 1. Dextrose solution 10% or 25% containing 10 units of crystalline insulin per 20 Gm dextrose, given I.V. in a dose of 300cc to 500cc in an hour. 2. Adsorption and exchange of potassium using sodium or ammonium cycle cation exchange resin, orally or as retention enema. 3. Hemodialysis or peritoneal dialysis. 4. Elimination of potassium-containing foods and medicaments.
Warning: Digitalis toxicity can be precipitated by lowering the plasma potassium concentration too rapidly in digitalized patients.
Administration and Dosage: Mix with water to make a pleasant tomato juice drink. The unit dose packet and the dose-measure supplied in the can each provide 20 mEq of potassium. Usual adult dose—1 packet or 1 measure of Kato Powder mixed with about 2 ounces of water twice daily—supplies 40 mEq potassium per day. Take with meals or follow with ½ glass of water. Larger doses may be required, but should be administered under close supervision because of the possibility of potassium intoxication.
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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Warnings: Should be used with caution in patients with cardiovascular disease, including hypertension. Development of chest pain or other aggravation of cardiovascular disease will require a decrease in dosage.

Injection of epinephrine in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This may be enhanced in patients receiving thyroid preparations. Careful observation is required if catecholamines are administered to patients in this category. Patients with coronary artery disease should be carefully observed during surgery, since the possibility of precipitating cardiac arrhythmias may be greater in those treated with thyroid hormones.

Thyroid replacement may potentiate anticoagulant effects with agents such as warfarin or bishydroxycoumarin and reduction of one-third in anticoagulant dosage should be undertaken upon initiation of LETTER® (sodium levothyroxine, Armour) tablets therapy. Subsequent anticoagulant dosage adjustment should be made on the basis of frequent prothrombin determinations.

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Precautions: Patients with hypothyroidism, and especially myxedema, are particularly sensitive to thyroid preparations so that treatment should begin with small doses and increments should be gradual.

In patients with diabetes mellitus, addition of thyroid hormone therapy may cause an increase in the required dosage of insulin or oral hypoglycemic agents. Conversely, decreasing the dose of thyroid hormone may possibly cause hypoglycemic reactions if the dosage of insulin or oral hypoglycemic agents is not adjusted.
Adverse Reactions: Excessive dosage of thyroid medication may result in symptoms of hyperthyroidism. Since, however, the effects do not appear at once, the symptoms may not appear for one to three weeks after the dosage regimen is begun. The most common signs and symptoms of overdosage are weight loss, palpitation, nervousness, diarrhea or abdominal cramps, sweating, tachycardia, cardiac arrhythmias, angina pectoris, tremors, headache, insomnia, intolerance to heat and fever. If symptoms of overdosage appear, discontinue medication for several days and reinstitute treatment at a lower dosage level.
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Future Medical Meetings

CURRENT CONCEPTS IN CORONARY HEART DISEASE

March 7 through April 25, 1973
Marshall Auditorium
Tucson Medical Center, Tucson, AZ

SPONSOR: Tucson Hospitals Medical Education Program

CONTACT:
Jay Silverman, M.D.
Tucson Hospital Medical Education Program
P. O. Box 6067
Tucson, AZ 85716

Approved for 8 required hours toward the ArMA Certificate in Continuing Medical Education.

MEDICAL VERSUS SURGICAL MANAGEMENT OF STROKE

March 15, 1973
Maricopa County General Hospital
East-West Wing — Phoenix, Arizona

SPONSOR: St. Luke's Hospital Medical Center

CONTACT:
Max Johnson, M.D.
555 West Catalina Drive
Phoenix, AZ 85013

Approved for 3½ required hours toward the ArMA Certificate in Continuing Medical Education.

DIAGNOSIS AND TREATMENT OF LIVER DISEASE

March 15, 1973
Yavapai Community Hospital, Prescott, AZ

SPONSOR: Arizona Regional Medical Program

CONTACT:
D. W. Melick, M.D.
5725 E. Fifth St.
Tucson, AZ 85711

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SEMINARS IN FAMILY PLANNING

March 17-23, April 14-20
May 12-18, June 16-22
University of California
At Los Angeles

SPONSOR: The American College of Obstetricians and Gynecologists, The University of California at Los Angeles

CONTACT:
Irvin Cushner, M.D.
University of California, Los Angeles
Dept. of OBG
School of Medicine
The Center for the Health Sciences
Los Angeles, CA 90024
Phone: (213) 825-1046

PRESENT STATUS OF MANAGEMENT OF BREAST LUMPS AND CARCINOMA

March 22, 1973
Copper Queen Hospital, Bisbee, AZ

SPONSOR: Arizona Regional Medical Program

CONTACT:
D. W. Melick, M.D.
5725 E. Fifth St.
Tucson, AZ 85711

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

CLINICAL RECOGNITION AND MANAGEMENT OF HEART DISEASE

March 22-24, 1973
Main Auditorium, Univ. Hospital

SPONSOR: University of Arizona College of Medicine

CONTACT:
Frank I. Marcus, M.D.
Gordon A. Ewy, M.D.
1501 N. Campbell Ave.
Tucson, AZ

Approved for 20 required hours toward the ArMA Certificate in Continuing Medical Education.

PSYCHIATRIC GRAND ROUNDS

March 23, 1973
Arizona Medical Center, Tucson, AZ

SPONSOR: Arizona Psychiatric Society

CONTACT:
William B. Haeussler, M.D.
3352 E. Camelback
Phoenix, AZ 85018

Approved for 4 required hours toward the ArMA Certificate in Continuing Medical Education.

PARENT LOSS AND WHAT HAPPENS TO ABUSED CHILDREN

March 24, 1973
Westward Look, Tucson, AZ

SPONSOR: Arizona Psychiatric Society

CONTACT:
William B. Haeussler, M.D.
3352 E. Camelback
Phoenix, AZ 85018

Approved for 4 required hours toward the ArMA Certificate in Continuing Medical Education.

MANAGEMENT OF CHRONIC RESPIRATORY DISEASE

March 27, 1973
Lawrence Memorial Hospital
Cottonwood, AZ

SPONSOR: Arizona Regional Medical Program

CONTACT:
D. W. Melick, M.D.
5725 E. Fifth St.
Tucson, AZ 85711

Approved for 2 required hours toward the ArMA Certificate in Continuing Medical Education.

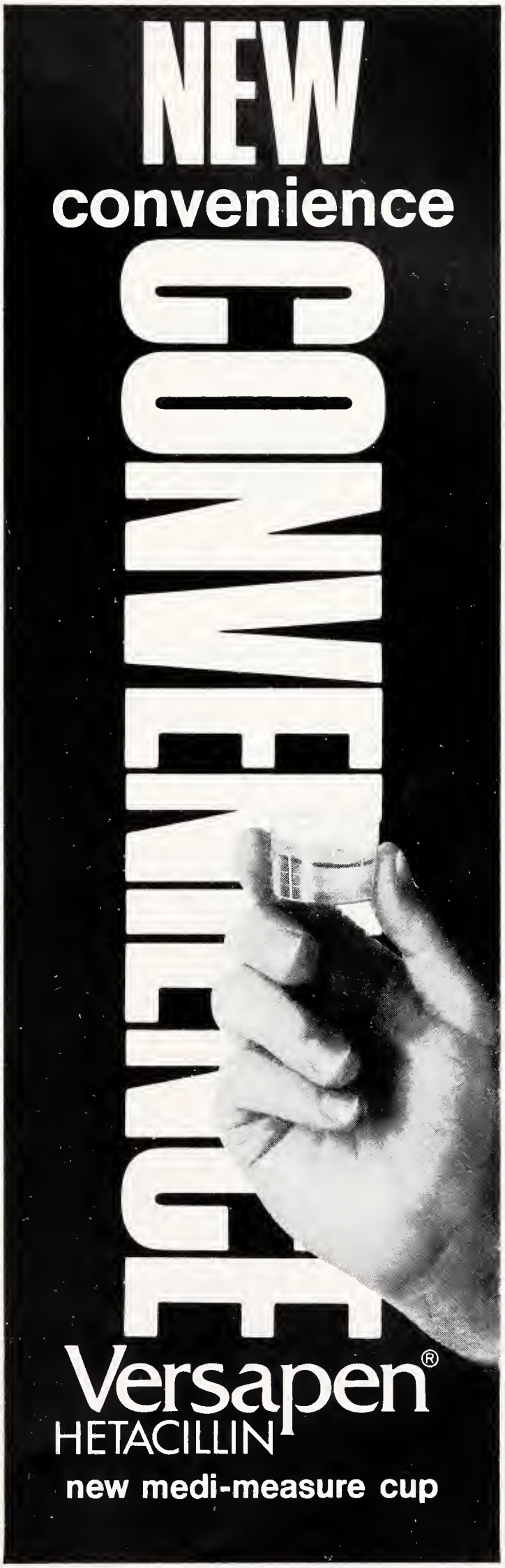
MEDICAL-DIETETIC SYMPOSIUM THE HEART OF THE MATTER

March 29-30, 1973
Arizona Medical Center, Tucson, AZ

SPONSOR: U of A College of Medicine &
United States-Mexico Border Public Health Assoc.,
& Nutrition Council of Arizona

CONTACT:
Otto F. Sieber, Jr., M.D.
Arizona Medical Center
Dept. of Pediatrics
Tucson, AZ 85724

Approved for 7 required hours toward the ArMA Certificate in Continuing Medical Education.



DIAGNOSTIC METHODS IN PULMONARY DISEASES

March 30, 1973
Ramada Inn, 404 North Freeway
Tucson, AZ

SPONSOR: St. Luke's in the Desert Chest Disease Center, College of Medicine University of Arizona

CONTACT:
Milan Novak, Ph.D., M.D., Coordinator
Arizona Medical Center
Tucson, AZ 85724

GYNECOLOGICAL LAPAROSCOPY

April 9, 10, 11 & 12
Good Samaritan Hospital
And the Surgicenter

SPONSOR: Good Samaritan Hospital, The Surgicenter and Arizona Family Planning Service

CONTACT:
David Pent, M.D.
Program Chairman
c/o Arizona Family Planning Service
2021 North Central Ave.
Phoenix, AZ 85004

Approved for 18 required hours toward the ArMA Certificate in Continuing Medical Education. (Courses will also be offered in June, July, August, October and November.)

ANNUAL CONGRESS AMERICAN COLLEGE OF ALLERGISTS

April 8-12, 1973
Marriott Motor Hotel, Atlanta, Georgia

SPONSOR: American College of Allergists

CONTACT:
John D. Gillaspie, M.D.
2141 14th St.
Boulder, CO 80302

Approved for 30 required hours toward the ArMA Certificate in Continuing Medical Education.

82ND ANNUAL ArMA SCIENTIFIC SESSION

April 26-27, 1973
Safari Hotel, Convention Center,
Scottsdale, AZ

SPONSOR: Arizona Medical Association and U.C.L.A. College of Medicine

CONTACT:
Arizona Medical Association, Inc.
810 W. Bethany Home Road
Phoenix, AZ 85013

Approved for 13½ required hours toward the ArMA Certificate in Continuing Medical Education.

CLINICAL PSYCHIATRIC CONFERENCE

Weekly Wednesdays 11:40-12:45
Coconino Room, Maricopa County
General Hospital, Phoenix, AZ

SPONSOR: Maricopa County General Hospital, Dept. of Psychiatry

CONTACT:
Donald J. Holmes, M.D.
Maricopa County General Hospital
2601 E. Roosevelt
Phoenix, AZ

Approved for 1 elective hour per session toward the ArMA Certificate in Continuing Medical Education.

THE SURGICAL MEDICAL INTERPHASE FOR THE FAMILY PRACTITIONER

4th Tuesdays of Jan., Feb.,
March, April, May
Arizona Medical Center, Tucson, AZ

SPONSOR: U of A, College of Medicine, Dept. of Family & Community Medicine

CONTACT:
Anthony F. Vuturo, M.D.
U of A, College of Medicine
Dept. of Family & Community Medicine
Tucson, AZ 85724

Approved for 2 required hours per session toward the ArMA Certificate in Continuing Medical Education.

CONTINUING EDUCATION SEMINARS FOR PRACTICING PSYCHIATRISTS

Monthly — Thursday, 7:30 p.m.

SPONSOR: Department of Psychiatry
College of Medicine, Univ. of Arizona

CONTACT:
Alan I. Levenson, M.D.
Dept. of Psychiatry
Univ. of Arizona
Arizona Medical Center
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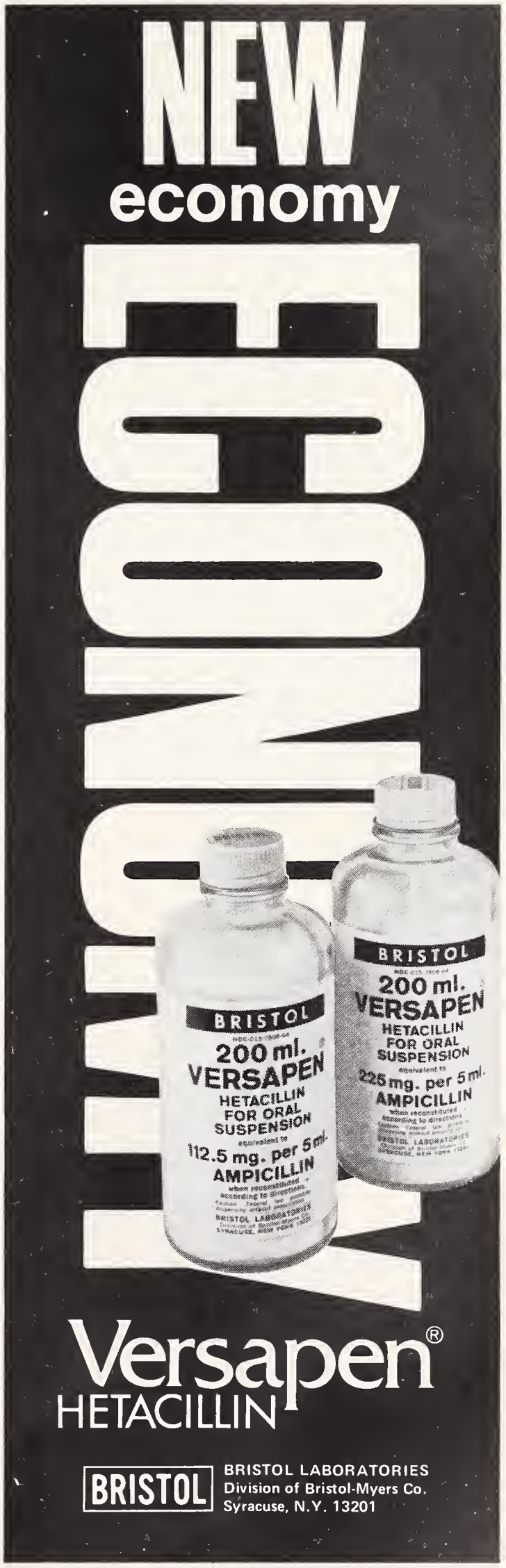
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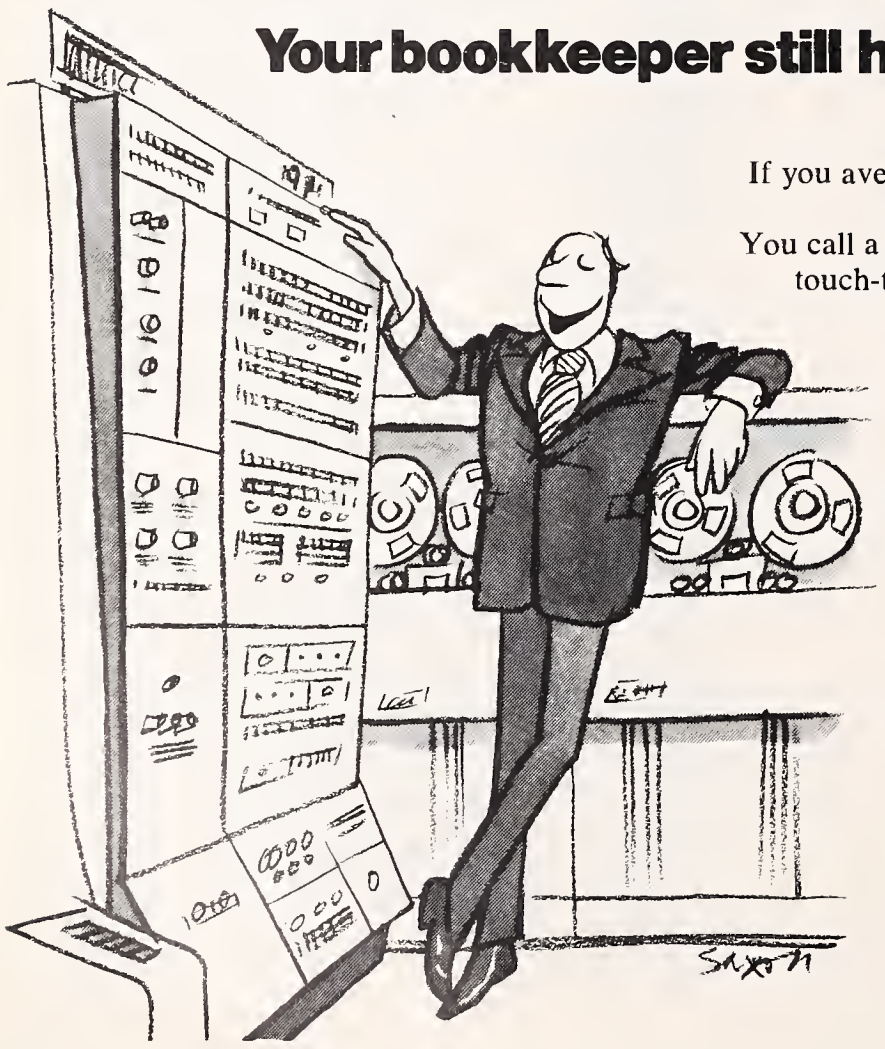
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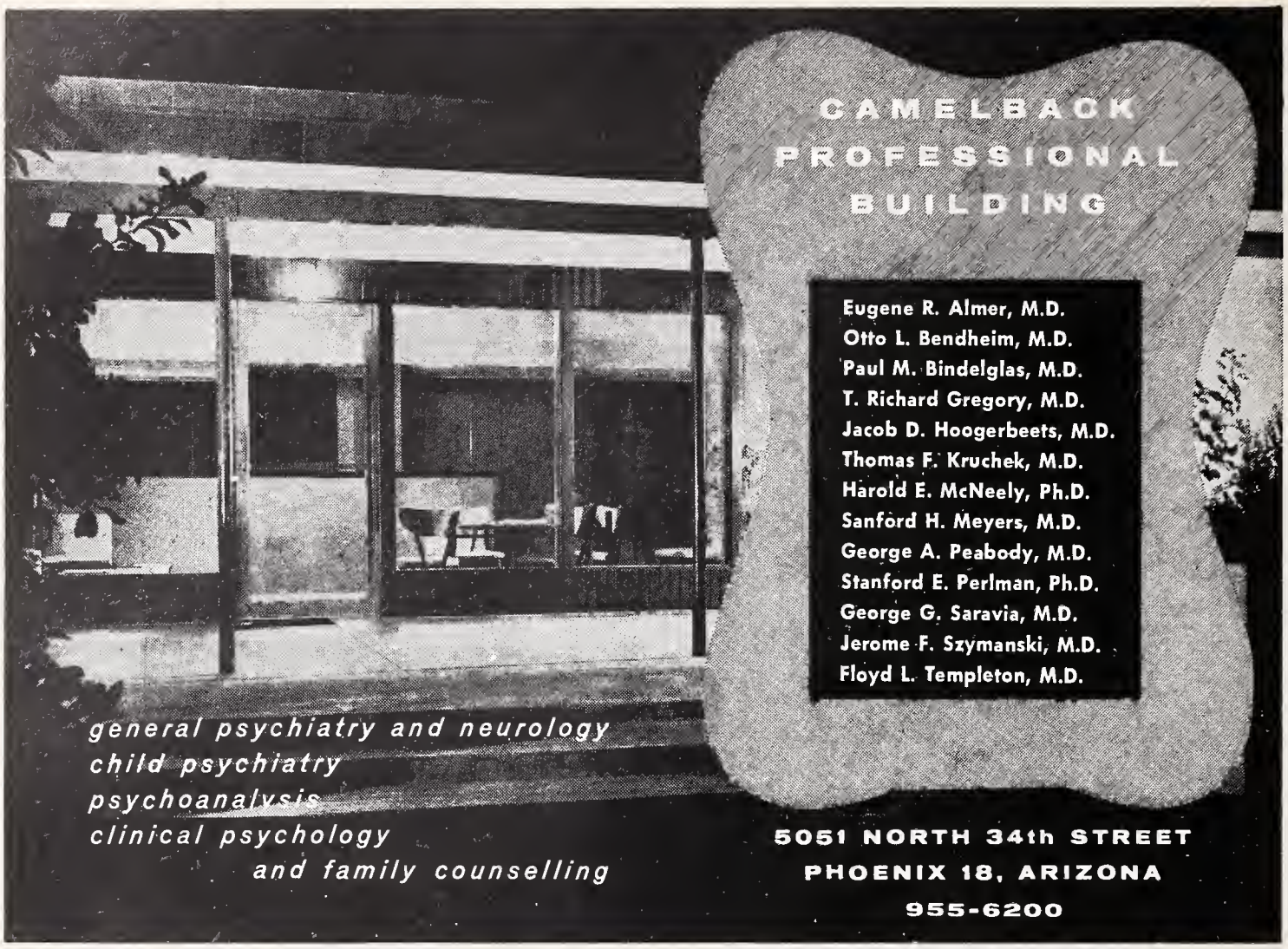
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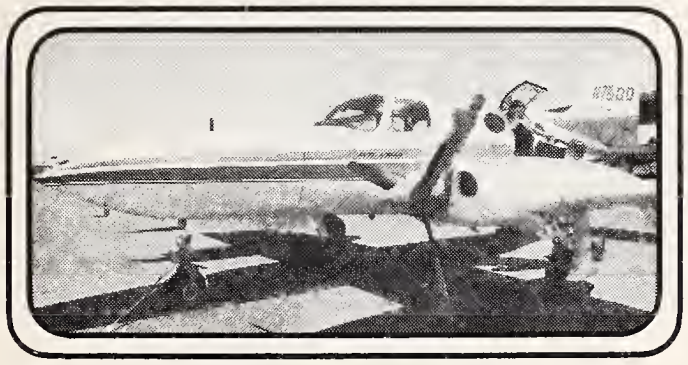
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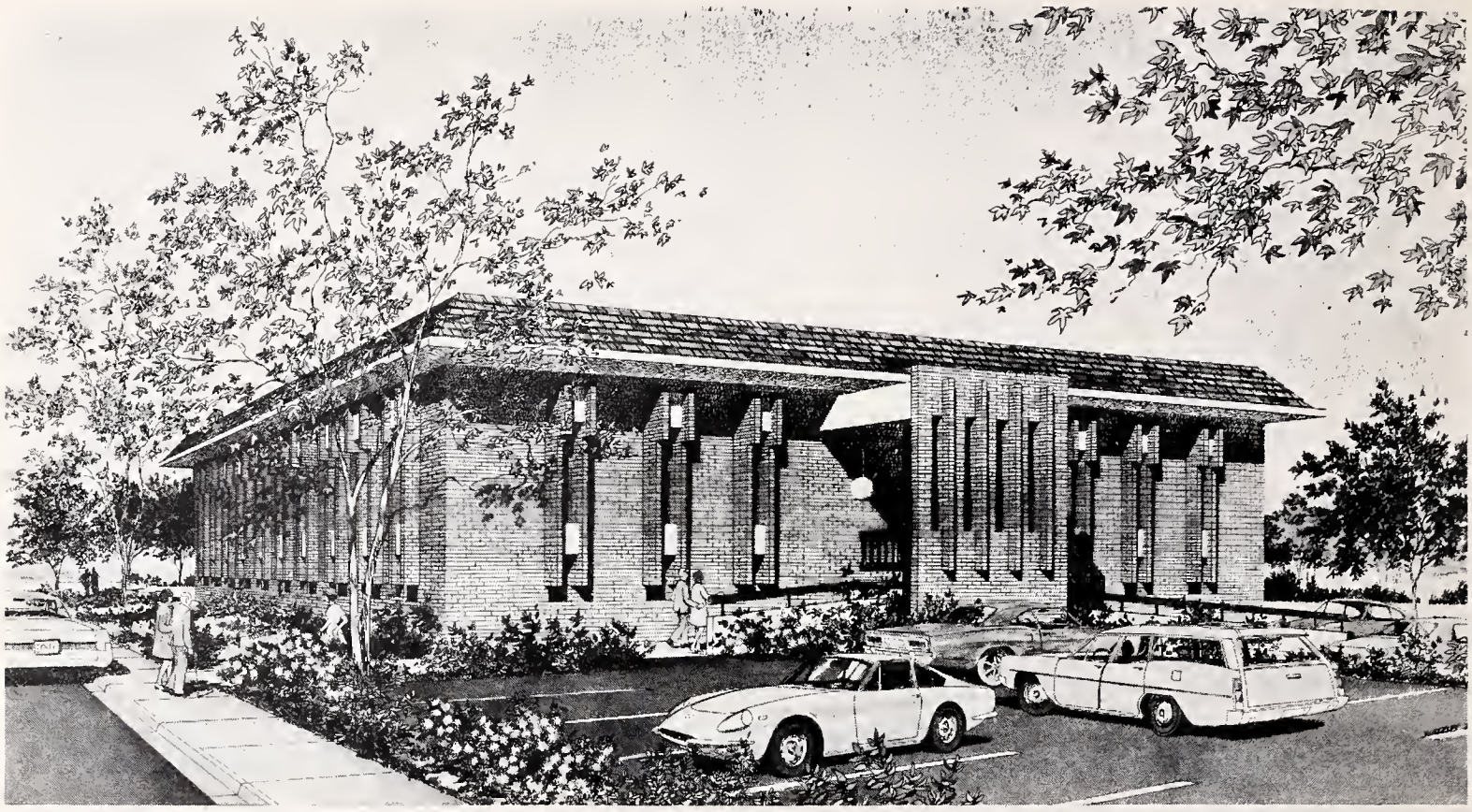
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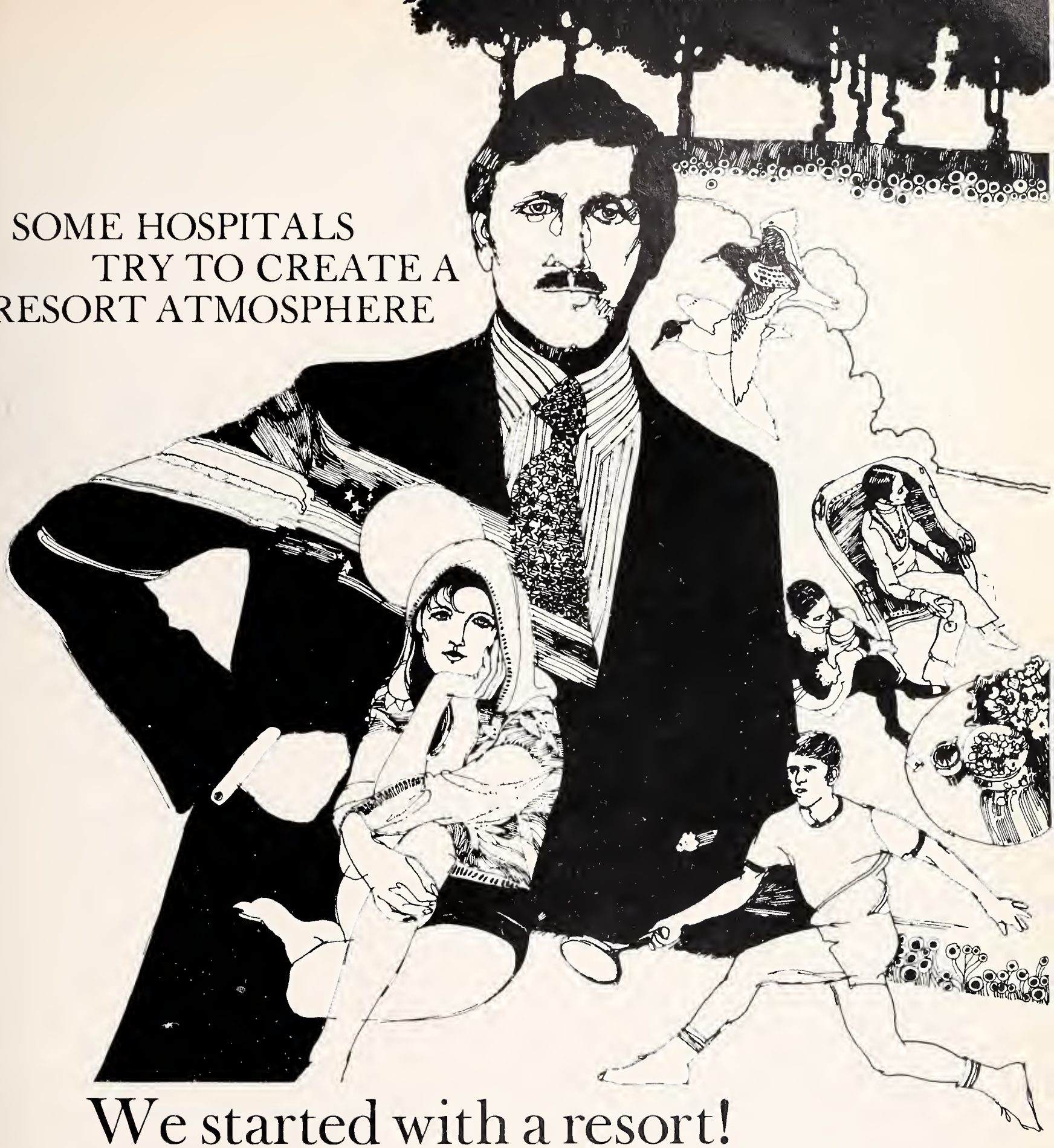
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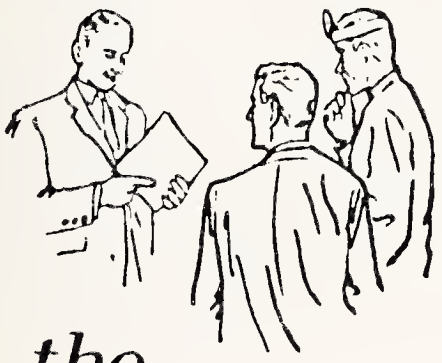
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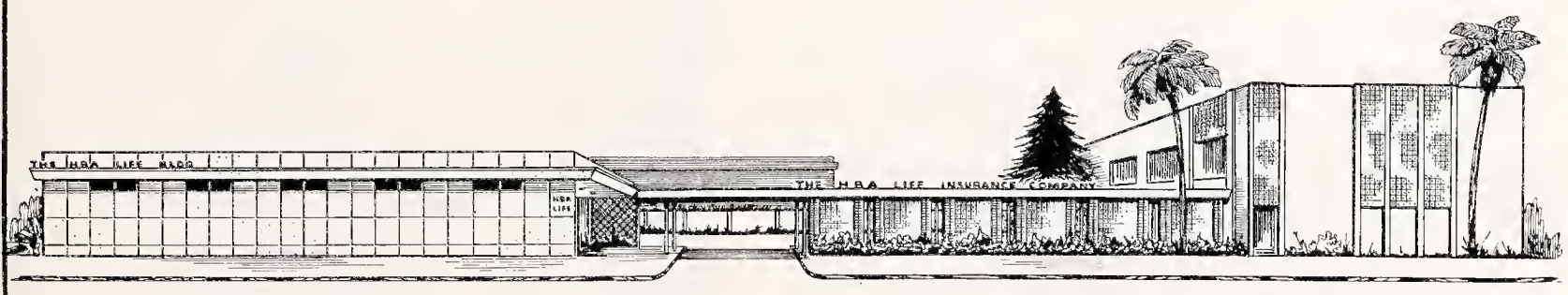
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Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.

Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphen late HCl is theoretically possible at high dosage not exceed recommended dosages. Administer caution to patients receiving addicting drug known to be addiction prone or having a histo drug abuse. The subtherapeutic amount of atr is added to discourage deliberate overdos strictly observe contraindications, warnings and cautions for atropine; use with caution in chi since signs of atropinism may occur even wit recommended dosage.

Adverse reactions: Atropine effects include dr of skin and mucous membranes, flushing and nary retention. Other side effects with Lomot clude nausea, sedation, vomiting, swelling o gums, abdominal discomfort, respiratory depres numbness of the extremities, headache, dizzi depression, malaise, drowsiness, coma, leth

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Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening, in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychologi dependence have not been reported o recommended doses, use caution in ad ministering to addiction-prone individu or those who might increase dosage.

Precautions: In elderly and debilitated initial dosage should be limited to 15 m to preclude oversedation, dizziness an or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effe Employ usual precautions in patients who are severely depressed, or with

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When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, nonbarbiturate agent proved effective and relatively safe for relief of insomnia.

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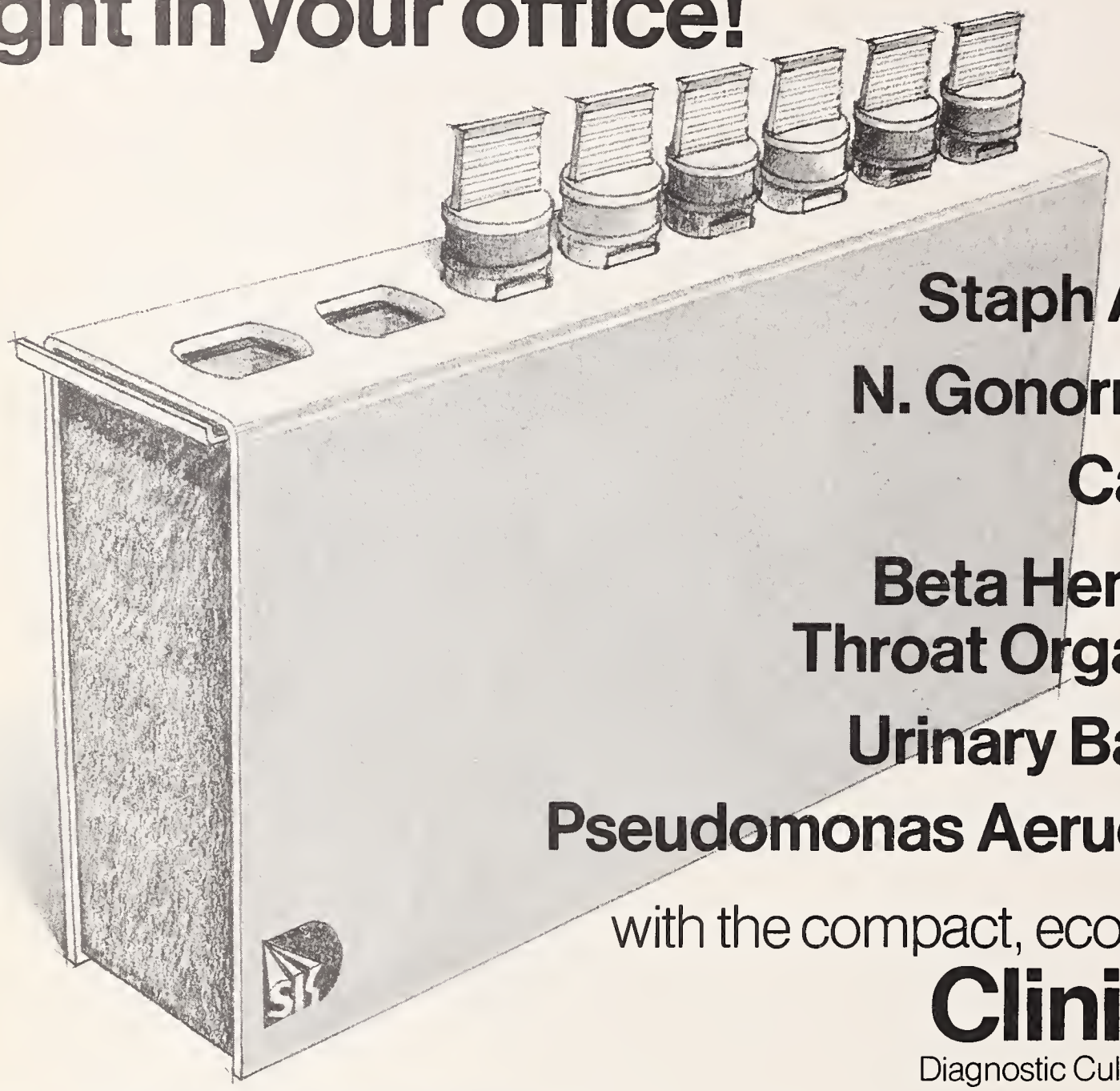
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ted therapy. Observe usual precau-
in presence of impaired renal or
ic function.

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lightheadedness, staggering, ataxia
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erly or debilitated patients. Severe
ion, lethargy, disorientation and
, probably indicative of drug intoler-
or overdosage, have been reported.
Also reported were headache, heartburn, upset stomach; nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

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April, 1973/VOL. 30, NO. 4

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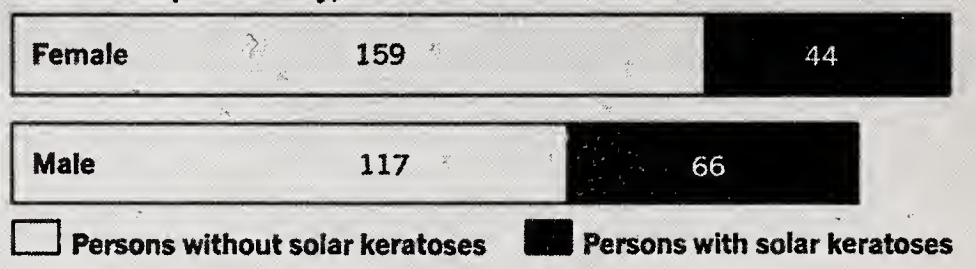
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (only in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

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Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

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Bio-Science Reports

The Venereal Disease Epidemic:

How To Use The Laboratory

In our newly revised "Laboratory Aid" (see below) devoted to diagnosis and treatment of syphilis and gonorrhea we quote Dr. Sidney Olansky: "Therefore, we have reached the point where the serologic problems associated with syphilis almost always can be resolved with the proper use of two tests: the VDRL slide test and the FTA-ABS test." ("Serodiagnosis of Syphilis" in The Medical Clinics of North America *56*:1145, 1972.) From our broad experience in laboratory services devoted to the diagnosis and follow-up of syphilis we know that the "almost always" part of Dr. Olansky's statement describes those situations which are most troublesome to physicians.

The VDRL test is somewhat insensitive in very early syphilis. Thus the FTA-ABS test, not ordinarily considered a screening procedure, may sometimes be the test of choice in those instances when the physician suspects early syphilis in the face of a "Non-reactive" VDRL test.

When a diagnosis of syphilis has been made, the efficacy of treatment should be checked by *periodic quantitative VDRL tests*—not by the FTA-ABS test, which may remain reactive for life even in cured syphilis.

False positive VDRL tests are usually transient and of low titer. If reactivity persists, the clinician should suspect an underlying "auto-immune" disturbance, perhaps SLE. Although not as frequent, false positive FTA-ABS tests also occur, usually because there is another disease involved; however, final resolution may not be possible until autopsy, if at all. The question of whether or not to start antibiotic therapy becomes strictly a clinical decision.

A recently described modification of the FTA test using CSF is available from our laboratory and may be of help for physicians faced with the possibility of neurosyphilis in older patients with *sero*-negative VDRL and reactive FTA-ABS tests. (Brit. J. Ven. Dis. *48*:97, 1972.)

Some Words on Gonorrhea

Unfortunately, a simple inexpensive screening test analogous to the VDRL is not yet available for gonorrhea. Transgrow Collection Kits make the services of our reference laboratory available to any physician seeking "bacteriological" confirmation of GC.

The Complement Fixation test for *N. gonorrhoeae* may be of value in uncovering "hidden" GC in the relatively asymptomatic female and in the Asian variety of gonorrhea.

In Summary

Bio-Science Laboratories offers an exceptionally complete array of tests to aid in the diagnosis of both syphilis and gonorrhea; our new booklet, "Laboratory Aids for the Diagnosis and Treatment of Gonorrhea and Syphilis," is available at no cost or obligation to guide clinicians in the selection of the appropriate tests and in the interpretation of test results.

Pertinent Tests Available at Bio-Science Laboratories

VDRL, qualitative, quantitative, and pre-marital
FTA-ABS
FTA, modified, for cerebrospinal fluid
Darkfield examination (local clients)
Direct FA stain for *T. pallidum* (for mailed specimens)
Gram stain and/or FA stain for *N. gonorrhoeae*
Complement-fixation Test for antibodies to *N. gonorrhoeae*
Routine culture for GC (local clients)
Transgrow Collection Kit for GC cultures (for mailed specimens)

Bio-Science Laboratories

Main Lab: 7600 Tyrone Ave.
Van Nuys, California 91405
Philadelphia Branch:
116 So. Eighteenth St.
Philadelphia, Pa. 19103

Bio-Science Laboratories
7600 Tyrone Avenue
Van Nuys, California 91405 Dept. A
Philadelphia Branch:
116 So. Eighteenth St.
Philadelphia, Pa. 19103

Gentlemen: Please send me—

☐ A copy of your booklet on LABORATORY AIDS FOR THE DIAGNOSIS AND TREATMENT OF GONORRHEA AND SYPHILIS.

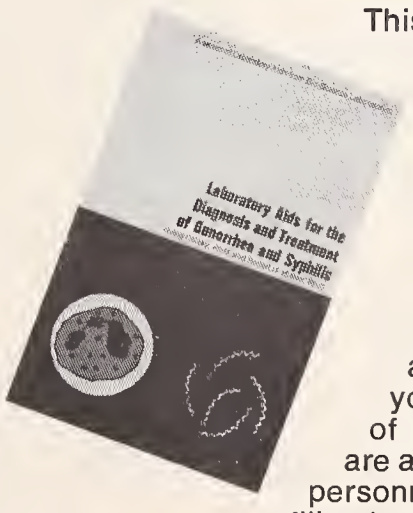
☐ A STARTER LAB PACK containing a small supply of postage-paid mailing containers and FEE SCHEDULE.

Name _____

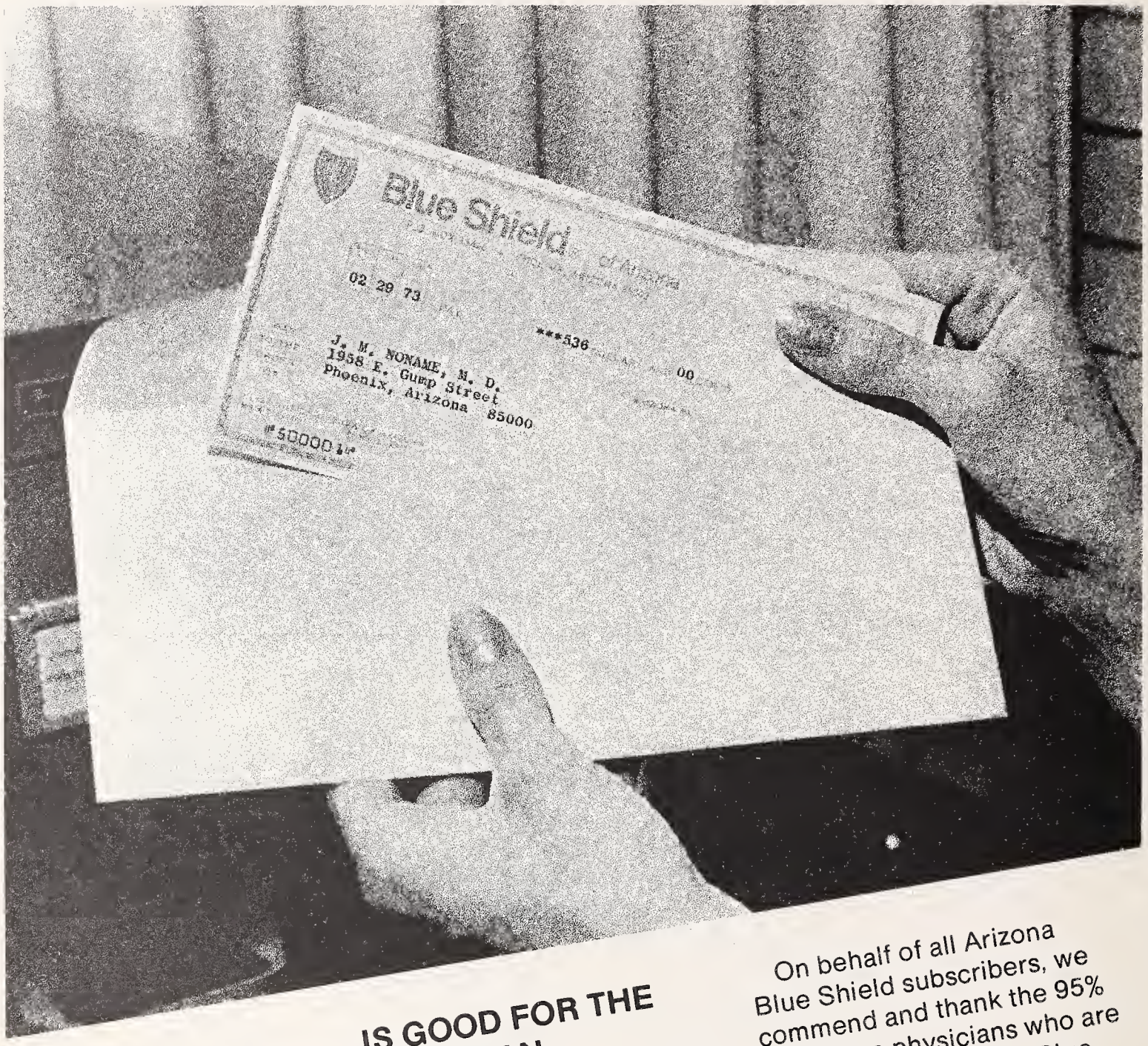
Address _____

City _____ State _____ Zip _____

FREE! Laboratory Aids for the Diagnosis and Treatment of Gonorrhea and Syphilis



This 12-page booklet, written by Drs. Olitzky and Blaker of the staff of Bio-Science Laboratories, contains a clear and graphic summary of the value and limitations of laboratory technics in the assessment of these venereal disease problems. You will find it to be a quick and ready reference to update yourself in this important area of laboratory medicine. Copies are available to physicians and lab personnel without obligation. Simply fill out and mail this coupon.



What's Good For The Patient

IS GOOD FOR THE PHYSICIAN.

In the age of consumerism, physicians have a right to be proud. What many are talking about now, physicians accomplished years ago when they created Blue Shield.

Today, more than ever, your support of Blue Shield still results in the same desireable benefits to both you and your patients.

On behalf of all Arizona Blue Shield subscribers, we commend and thank the 95% of Arizona physicians who are voluntarily enrolled in Blue Shield, keeping us... The Leader.

Blue Shield®
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®Registered Service Mark of the National Association of Blue Shield Plans

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation aronnd the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an nnderlying factor.

If a complete history and examination rnle out allergic rhinitis, the long-term ontlook will be a lot more favorable than his own "diagnosis" would have indieated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritating symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimnlation. Yonr patients will appreciate the 24-hour relief they can get from jnst one tablet every 12 hours.

Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.
CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.
WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.
PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.
ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.
HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

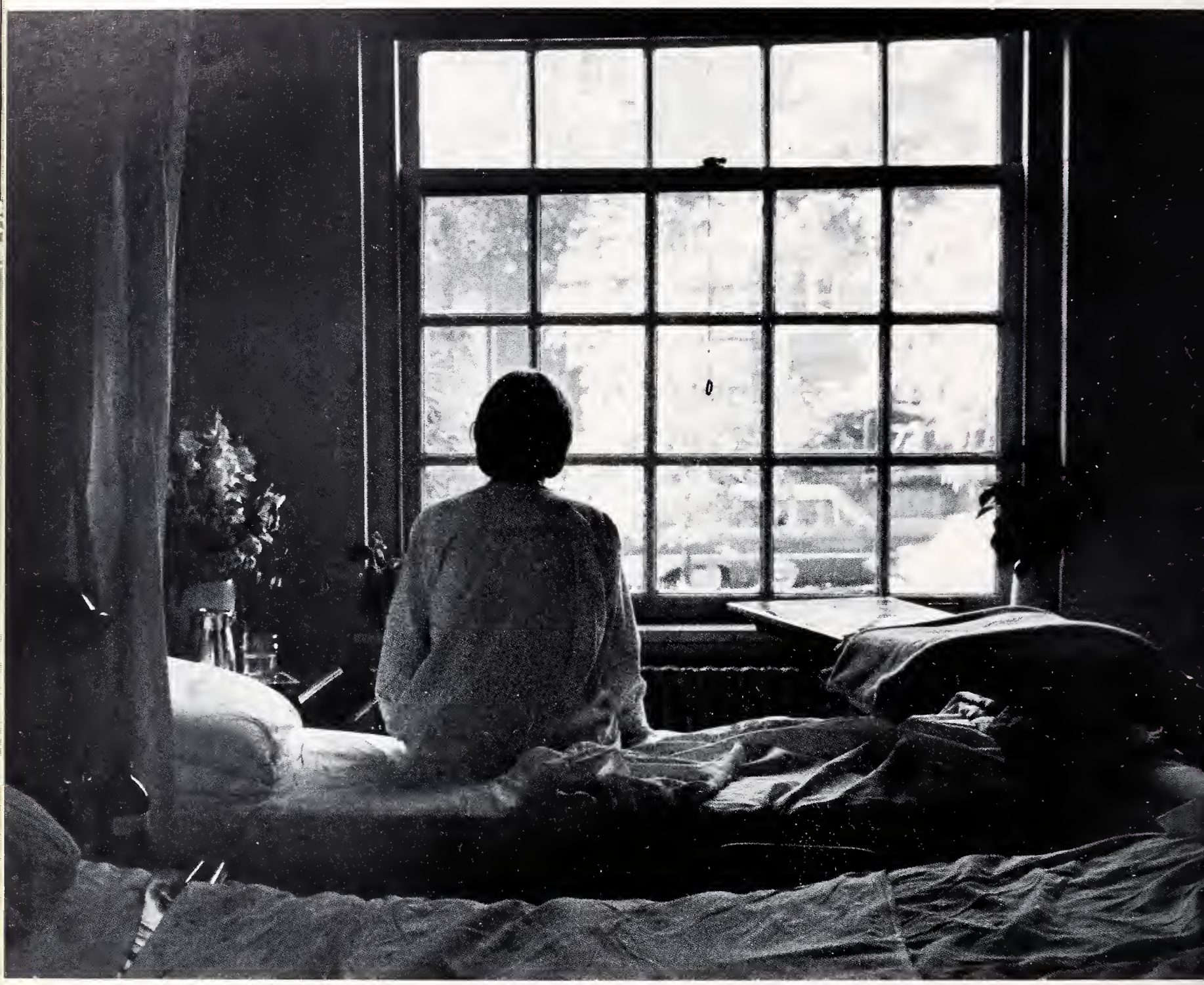
Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

A·H·ROBINS

A. H. Robins Company, Richmond, Va. 23220

when pain goes on... and on... and on–



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.

Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides ¼ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen® with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital (¼ gr.), 16.2 mg. (warning: may be habit forming); Aspirin (2½ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, ¼ gr. (No. 2), ½ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

Ⓒ III Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. A·H·ROBINS



With vulvovaginal candidiasis she can't wait for relief...



with Sporostacin Cream, in many cases, she doesn't have to.

A 14-day therapy* that provides prompt relief

Composition: SPOROSTACIN Cream contains chlordantoin 1% and benzalkonium chloride 0.05%, compounded with glyceryl monostearate, phosphoric acid, cetyl alcohol 2%, stearic acid, peanut oil, ionol, butanac, glycerin, benzoic acid and water.

***Indication**

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis.

Final classification of the less-than-effective indication requires further investigation.

Sporostacin Trademark Cream (chlordantoin 1% and benzalkonium chloride 0.05%)

Contraindications: None known.

Precautions: Cases of sensitization and irritation have been reported. When noted the drug should be discontinued.

Dosage: One applicatorful intravaginally twice daily for 14 days. Course of therapy may be repeated if necessary.

Supplied: SPOROSTACIN Cream is available in 3.35 oz. (95g) tubes with the ORTHO† Measured-Dose Applicator.

Ortho Pharmaceutical Corporation, Raritan, New Jersey 08869

Ortho

OPC 1973

†Trademark

Insights into the ulcer-prone

This man governs an empire—the section of beach that he combs—and he may have much in common with a business tycoon. Both may be ulcer-prone for similar reasons: both may be difficult to please—both may be demanding, especially of themselves. While there are many types of duodenal ulcer patients, it has been noted* that, characteristically, these individuals are not easily satisfied.

Measuring oneself against one's own expectations or against those of society may be equally trying—equally anxiety-provoking. It is hard to win when both success and failure can demand a similar price.

If the ulcer patient were to modify his expectations, he would experience less anxiety—and perhaps fewer ulcer attacks. In most cases, this would mean altering the entire constellation of psychological attitudes. Many are unwilling to do so, and many are unable. But while the patient is trying to make his best adjustment to his ulcer he often needs therapeutic relief for both the undue anxiety with which he may be plagued and the hypersecretion and hypermotility that cause pain and spasm.

*Palmer, E. D.: *Clinical Gastroenterology*, ed. 2, New York, Hoeber Medical Division, Harper & Row, 1963, p. 206.

Captain of Industry



Librax can relieve excessive anxiety, thereby helping to reduce pain and spasm

Since duodenal ulcer is frequently associated with excessive anxiety and tension, therapy logically demands relief from both the psychic and the somatic discomfort. Librax can help provide this dual relief. Only Librax provides in a single capsule both the antianxiety action of Librium® (chlordiazepoxide HCl) and the antisecretory/antispasmodic action of Quarzan® (clidinium Br). With Librax, the patient usually tends to react less strongly to anxiety-provoking situations, and hypersecretion and hypermotility are also reduced. A reduction of associated pain and spasm can also be expected, and often ulcer attacks become fewer and farther between!

Up to 8 capsules daily in divided doses

Optimum therapeutic response can be achieved with individualization of dosage—within the range of 1 or 2 capsules, 3 or 4 times daily. Many patients will respond well to 1 capsule *t.i.d.* and 2 at bedtime. Librax can often be relied on both to help in managing the acute attack and to help the patient maintain gains in therapy.

Librax: Initial therapy, Rx #35, Sig: cap. $\frac{i}{i}$ *t.i.d. a.c.* and $\frac{ii}{ii}$ *h.s.*

Follow-up therapy, Rx #100, Sig: cap. $\frac{i}{i}$ *t.i.d. a.c.* and $\frac{ii}{ii}$ *h.s.*

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis, and mild ulcerative colitis.

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Dosage: Individualize for maximum beneficial effects. Usual maintenance dose is 1 or 2 capsules, 3 or 4 times a day, before meals and at bedtime. Geriatric patients—see Precautions.

How Supplied: Librax® Capsules, each containing 5 mg chlordiazepoxide hydrochloride (Librium®) and 2.5 mg clidinium bromide (Quarzan®)—bottles of 100 and 500.

for the anxiety-linked symptoms of duodenal ulcer adjunctive

Librax®

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

When irritable colon feels like this



. . **KINESED®** provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distention and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899

(from the Greek **kinetikos,**
to move,
and the Latin **sedatus,**
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

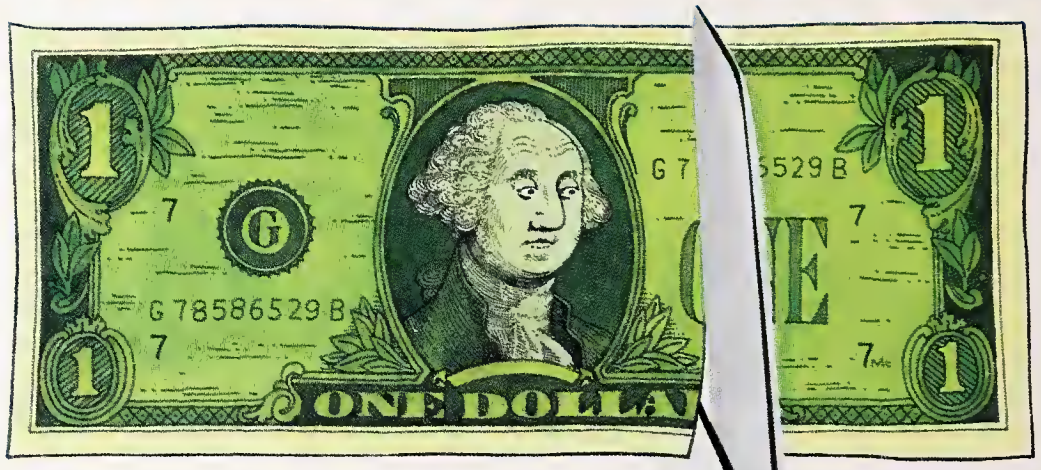
Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

THE PRICE OF LETTER® (SODIUM LEVOTHYROXINE, Armour) Tablets

Armour brand of T_4

HAS BEEN CUT BY 30%.



Wouldn't it be a good idea to start your new hypothyroid patients on Letter®?

- New scored tablets for easy dosage adjustment.
- color coded and potency marked tablets for quick identification.
- 6 potencies.



0.025 mg. 0.05 mg. 0.1 mg. 0.2 mg. 0.3 mg. 0.5 mg.

Indications: Hypothyroid conditions.
Contraindications: Thyrotoxicosis, acute myocardial infarction and in the presence of uncorrected adrenal insufficiency because it increases the tissue demands for adrenocortical hormones and may cause an acute adrenal crisis.
Warnings: Should be used with caution in patients with cardiovascular disease, including hypertension. Development of chest pain or other aggravation of cardiovascular disease will require a decrease in dosage.

Injection of epinephrine in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This may be enhanced in patients receiving thyroid preparations. Careful observation is required if catecholamines are administered to patients in this category. Patients with coronary artery disease should be carefully observed during surgery, since the possibility of precipitating cardiac arrhythmias may be greater in those treated with thyroid hormones.

Thyroid replacement may potentiate anticoagulant effects with agents such as warfarin or bishydroxycoumarin and reduction of one-third in anticoagulant dosage should be undertaken upon initiation of LETTER® (sodium levothyroxine, Armour) tablets therapy. Subsequent anticoagulant dosage adjustment should be made on the basis of frequent prothrombin determinations.

In patients whose hypothyroidism is secondary to hypopituitarism, adrenal insufficiency will probably also be present. When adrenal insufficiency and hypothyroidism coexist, the adrenal insufficiency should be corrected by corticosteroids before administering thyroid hormone.
Precautions: Patients with hypothyroidism, and especially myxedema, are particularly sensitive to thyroid preparations so that treatment should begin with small doses and increments should be gradual.

In patients with diabetes mellitus, addition of thyroid hormone therapy may cause an increase in the required dosage of insulin or oral hypoglycemic agents. Conversely, decreasing the dose of thyroid hormone may possibly cause hypoglycemic reactions if the dosage of insulin or oral hypoglycemic agents is not adjusted.
Adverse Reactions: Excessive dosage of thyroid medication may result in symptoms of hyperthyroidism. Since, however, the effects do not appear at once, the symptoms may not appear for one to three weeks after the dosage regimen is begun. The most common signs and symptoms of overdosage are weight loss, palpitation, nervousness, diarrhea or abdominal cramps, sweating, tachycardia, cardiac arrhythmias, angina pectoris, tremors, headache, insomnia, intolerance to heat and fever. If symptoms of overdosage appear, discontinue medication for several days and reinstitute treatment at a lower dosage level.
Dosage: Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every 1 to 3 weeks until proper metabolic balance is achieved.
Available: Bottles of 100 tablets, in 6 potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

Armour Pharmaceutical Company
Phoenix, Arizona 85077

"The history of science, and in particular the history of medicine...is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

–George Sarton, from "The History of Medicine Versus the History of Art"

Are there significant differences in bioavailability and clinical predictability among drug products?

Opinion

Results of a questionnaire to 7,000 physicians:

44.6%
Agree there is a significant difference

24.9%
Believe there is no difference

30.5%
Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictability More Important Than Pr

Although the question price has been greatly aggerated, it is true t patients can on occas save money on gene drugs. But you are not ing to dare attempt to s money if it jeopardizes patient's health. Let's turn to the example t has become very promin in recent years, that of cardiac glycosides. Tl are probably the most t drugs we use with resp to the small difference tween a maximally effec dose and a toxic dose. W you are dealing with dr of this type, the first c cern must be clinical dictability. At the risk variations in bioavaila ity, it would be sheer f to try to save the pat what might amount maybe $10 or $20 a y The physician cannot n age his patient unless h sure that the drug h prescribing has the s positive effect each the prescription is renev This is especially sig cant when the patient t the product, not for mor but for the rest of his li

Maker of Medicine

C. J. Cavallito, Ph.D.
Executive Vice President
Ayerst Laboratories



Although equivalence of ferent preparations of a *ug substance* may be de- ed by certain physical, emical or biological char- eristics, identity is not ways assured even though ese characteristics may described in compendia ch as the USP, NF or de- ned by other specific urce standards. More- er, even with equivalent ug substances, similar armaceutical *products* n be produced by differ- t manufacturers such nt these products are bio- ically or therapeutically equivalent.

A Growing Awareness of Potential for Nonequivalence

As experience increases th drug substances de- ed from different sources d under different condi- ns, it should be possible establish specifications in ficient detail to minimize potential for their non- uivalence. However, ere is general agreement at product therapeutic uivalence would still not assured even if one could minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequivalent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalance have appreciably improved.

Product Selection Based on Patient Response

Improved specifications and standards can better assure the equivalence of *drug substances*. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the *drug product*, not the *drug substance*, that the physician, pharmacist, nurse and patient-customer utilize. How can these individuals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.

P·M·A

The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

A DOUBLE-DUTY DIURETIC

Trademark

DYAZIDE®

Each capsule contains 50 mg. of Dyrenium® (brand of triamterene) and 25 mg. of hydrochlorothiazide.

GETS THE WATER OUT IN EDEMA

BRINGS DOWN BLOOD PRESSURE IN HYPERTENSION*

SPARES POTASSIUM IN BOTH

Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

***Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

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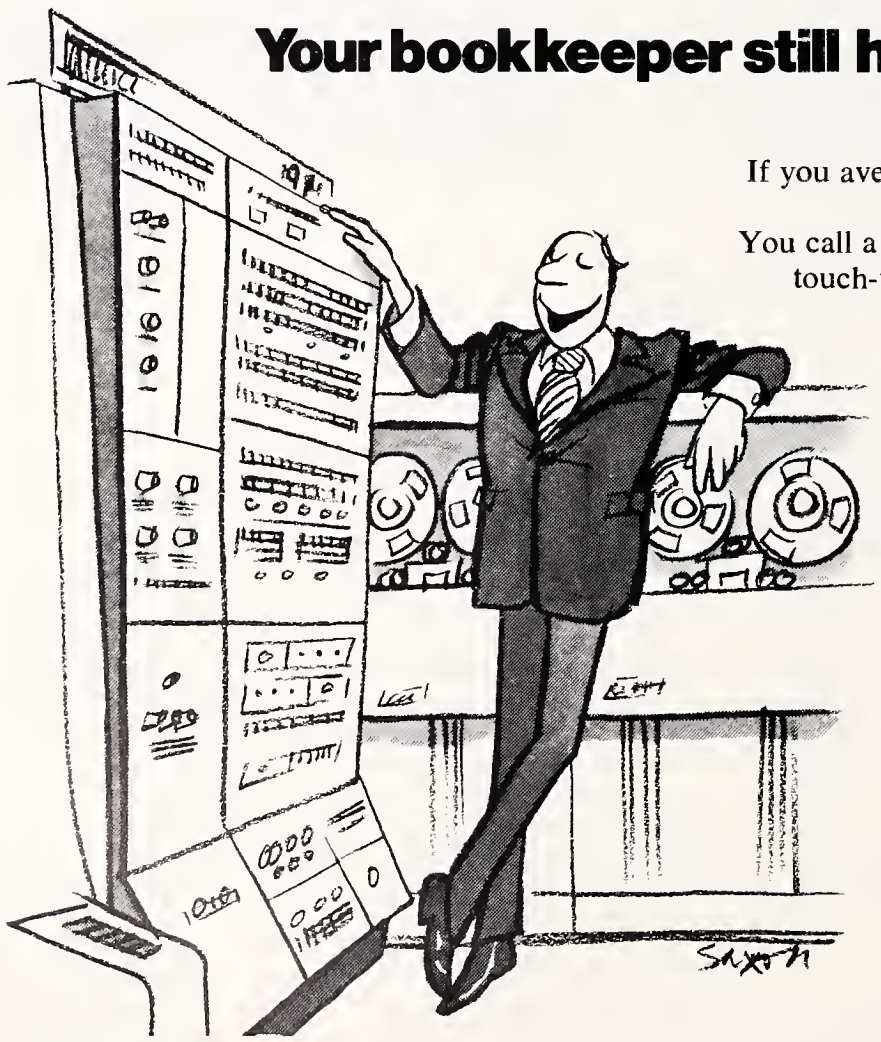
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THE AMERICAN COLLEGE OF PHYSICIANS



ASHTON B. TAYLOR, M.D., F.A.C.P.
GOVERNOR FOR ARIZONA
THE AMERICAN COLLEGE OF PHYSICIANS

The American College of Physicians has long stood for quality and excellence of care in the field of Internal Medicine. Even in these days when there is a trend to the "put down" of traditions in medicine, the title of Fellow, American College of Physicians (F.A.C.P.) is sought in even greater numbers than in times past. Fellowship status in the College requires Certification by the American Board of Internal Medicine, proof of competence in medical care by ones own peers and evidence of contribution to medical literature either by published articles or careful case reports.

The educational activities of the American College of Physicians have long been its Number One priority. These consist of one annual meeting of the entire College, numerous post graduate courses held throughout the country and the Regional Meetings held by state or regional groups usually once a year. Regional meeting have traditionally served as forums for practicing clinicians to present their researches, studies and procedural evaluation of current topics. Over the years, our regional meetings have consistently produced a standard of excellence for scientific meetings that would be the envy of many national meetings. The participation of the College of Medicine over the last four years has produced a happy symbiosis which has contributed even more to the excellence of our programs.

The papers published in this issue are representative of the many which were given at the Regional Meeting of the College this past November 17 and 18, at the Arizona Biltmore in Phoenix. We will meet again this coming November in Tucson. The meeting is open to all interested physicians whether or not they are members of the American College of Physicians. I can assure you it will be a worthwhile experience.

CATAMENIAL PNEUMOTHORAX

David J. Crosby, M.D., F.A.C.P.
Director, Medical Residency Program
Good Samaritan Hospital

For most women, menstruation is no more than a nuisance. But there are some women who link "the curse" with almost any symptom known to man. Many of them are considered to be neurotic by most physicians. But when a woman comes in complaining of pleuritic right chest pain and tells of repeated episodes of chest pain related to menstrual periods, she should be taken seriously.

Since the first report in 1958[1] of a woman who had repeated episodes of right pneumothorax associated with menstruation, nineteen additional patients with this unusual syndrome have been described. [2-9] Lillington and co-workers have aptly named this syndrome, catamenial pneumothorax.[9]

This paper concerns another such patient. The clinical features of all reported cases will be presented and the etiology and pathogenesis of this peculiar entity will be discussed.

In October, 1953, a 34 year old Caucasian unmarried female was referred for evaluation of pulmonary infiltrates which appeared while she was living in Haiti. Three weeks before admission to the U. S. Public Health Service Hospital in Baltimore, Maryland she noted pleuritic left chest pain, chills and fever, but no other symptoms. Malaria was diagnosed and treated with relief of fever, but a chest X-ray revealed bilateral nodular densities.

Upon arrival at the hospital she had no symptoms and physical examination was normal except for the presence of uterine fibroids. The chest X-ray compared with a film taken five days before showed incomplete resolution of bilateral nodular pulmonary densities. No etiology for the pulmonary infiltrates was discovered and the densities disappeared within ten days. A final chest X-ray prior to discharge showed no abnormalities except for a small right pneumothorax with minimal effusion on the right. When questioned, the patient stated that she had begun menstruating four days before and that she had noted her "usual" right chest pain at the time. She had had similar pains on the day preceding menses associated with about four out of each five periods during the previous six years. The pain was pleuritic and lasted for two or three days but was never severe enough to require medical attention.

The pneumothorax resolved within two weeks. The next three menstrual cycles were preceded by one day by right chest pain. Chest X-ray on each occasion showed a small right pneumothorax. In the next cycle, the right pneumothorax appeared on the first day of mentrual flow but there was no associated chest pain. The lung always completely re-expanded between each menstrual period.

The patient then underwent exploratory thoractomy, excision of pleural blebs from the apex of the right lung and pleural talc poudrage. There was no evidence of intrathoracic endometriosis. Two months later she returned for pelvic exploratory laparotomy and excision of several uterine myomata. There was no evidence of pelvic endometriosis. Following her chest surgery she had no recurrence of chest pain or of pneumothorax on repeated examinations during the next year. A letter was received from her several years later asking for summaries of her hospitalization to give to doctors because "I'm quite sure that they don't really believe me when I try to tell them what happened to me." In the interim she had not had any symptoms or signs of pneumothorax.

DISCUSSION

This patient represents the twenty first reported cases of pneumothorax associated with menses since 1958. There are features of this syndrome which are shared by many but not all of the patients.

1. In all patients, symptoms or signs of pneumothorax appeared within 48 hours of the first day of menstruation.
2. In all patients, the pneumothorax involved only the right hemithorax.
3. All but three patients had 2 or more X-ray documented episodes of right catamenial pneumothorax. (Table 1)
4. All but five patients gave a history of symptoms consistent with repeated episodes of right catamenial pneumothorax. (Table 1)
5. All but one woman first noted symptoms after the age of twenty-five years; more than half had the onset of the syndrome at or beyond the age of thirty. The mean age of onset was 30.6 years; the range of ages was 24 to 39 years.
6. In seven patients, ovulation was suppressed with birth control medication. While on medica-

tion, none of them experienced pneumothorax. One patient stopped the pills on two occasions with prompt recurrence of right-sided pneumothorax during the first or second menstrual period after discontinuing the medication.[9]

TABLE 1
Catamenial Pneumothorax
21 Patients

	Number of Episodes Proven by X-Ray	Proven by History
Range	1-25	1-60+
Mean	5	18

Other features are much less constant:

1. Nineteen of the patients underwent exploratory thoracotomy. Seven had intrathoracic endometriosis alone, seven had pleural blebs and one had both endometriosis and blebs. Two patients who had diaphramgmatic endometriosis had holes in the diaphragm. In five patients, no intrathoracic pathology was found.

2. Ten patients had pelvic endometriosis on clinical grounds. Of these, six had the diagnosis confirmed by surgery. Three of the women without symptoms of endometriosis had surgery for other reasons and ovarian endometriosis was found in one of them.

COMMENT

The etiology and pathogenesis of catamenial pneumothorax are unknown. Endometriosis probably plays a role because of its frequent association with the syndrome. The age distribution is also suggestive of endometriosis since it is different from that of patients with idiopathic spontaneous pneumothorax and parallels that of women with endometriosis.[8] But twelve of nineteen patients who underwent thoractomy had no evidence of endometrial tissue in the thorax.

Some authors[1, 7] have postulated that the presence of pelvic endometriosis somehow permits entry of air into the peritoneal cavity and thence into the thorax through diaphragmatic holes. There is no evidence that this occurs and some evidence that it does not.[7, 9]

Pleural blebs are the most common cause of spontaneous pneumothorax yet they were found in only seven of the nineteen patients with catamenial pneumothorax who had definitive surgery. Excision of pleural blebs or of endometrial implants may not prevent recurrent pneumothorax unless the pleural space is surgically obliterated.

The facts that not all menstrual cycles are associated with pneumothorax and that drugs which suppress ovulation seem to prevent pneumothorax strongly suggest that ovulation is an essential feature of the syndrome. Thus, a hormonal factor may be operational in the release of air into the thorax.

None of these concepts can explain catamenial pneumothorax in all of these patients. It may be that there are multiple factors which produce the syndrome, but the evidence is pretty firm that there is more than a coincidental relationship between menstruation and the appearance of pneumothorax in these women.

The condition is probably very rare since only 21 cases have ever been reported. I have been looking for a second case of my own for years without success. Review of medical records of menstruating women with spontaneous pneumothorax in several hospitals in various parts of the country has not uncovered a single case. On the other hand, although spontaneous pneumothorax in women is uncommon, a recorded menstrual history in these women is even more rare!

SYNOPSIS — ABSTRACT

Catamenial pneumothorax is a rare but definite clinical entity appearing in women at about the age of thirty years.

Pneumothorax occurs within 48 hours of the onset of menstruation and always involves the right side. It may not occur with every period.

Supression of ovulation by administration of hormonal drugs appears to prevent recurrence of pneumothorax in these patients.

The etiology of the syndrome remains unknown, through ovulatory menstrual cycles, endometriosis, and pleural blebs play an undefined role.

Treatment with hormones which suppress ovulation should make thoracotomy unnecessary. If thoracic surgery is to be done, the procedure should include obliteration of the pleural space.

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QUANTITATIVE STUDY OF DOCTOR-PATIENT COMMUNICATION IN RHEUMATIC DISEASES

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With the current emphasis on delivery of health care, increased interest has developed in learning more about the various aspects of doctor-patient interaction. Until recently, there has been little objective data measuring the degree to which a physician effectively communicates with his patients. Earlier studies have focused primarily on patients' compliance with a medical regimen as a measure of doctor-patient communication. Roth and Berger[1] found that patients admitted to a Veterans Administration Hospital for an acute attack of peptic ulcer disease took only 40% of prescribed medication provided for them at the bedside. Francis and Associates[2] interviewed mothers of children attending a pediatric clinic and found a significant relation between mothers' satisfaction with the consultation and subsequent compliance with physician's orders. In a recent study, Joyce and colleagues[3] studied doctor-patient communication at an outpatient rheumatology clinic in London. Explanatory material given by the physician was recorded and compared with the information recalled to an interviewer. The interviewer tried to determine, by a series of open-ended questions, how much material the patient recalled. These workers found that physicians, during a consultation, imparted an average of ten items of information and that slightly less than half the items were retained by the patient. This was true whether the interview was immediately after consultation or delayed from one to four weeks. We thought it would be of interest to do this study in a private practice setting with one minor modification. We thought that the use of a standard structured interview designed for verbatim recording might reveal a higher percentage of information retained.

During a one month period, consecutive new patients in a private rheumatology practice were asked to participate in a study of doctor-patient communication. A brief written description of the study was given to each patient prior to consultation and the patient could indicate willingness to volunteer by checking a "yes" response.

The rheumatologists were asked to conduct routine new patient evaluations, attempting to restrict all explanatory material to the end of the consultation period. This portion of the consultation was recorded. Immediately afterward, the patient was given a structured interview to determine how much explanatory material was retained. The interview included a short quiz in which patients were asked to define common rheumatologic terms. Items of information from the consultation and interview were tabulated and assigned to the following categories:

A. Rheumatologic diagnosis and related explanation.

B. Other explanatory material, *not* directly related to the rheumatologic diagnosis.

C. Medication: dosage, side effects and mechanism of action.

D. Other modalities of therapy, such as exercise, rest and various forms of heat.

E. Laboratory tests and x-ray studies.

F. Follow-up care.

Complete data is available on sixteen patients. These included twelve women and four men. Seven patients had rheumatoid arthritis, seven patients had osteoarthritis and there was one patient each with myofascial pain and monarthritis of undetermined etiology. Results are summarized in Table 1.

Table 1

Category	A	B	C	D	E	F
items given	9	1.5	5.1	1.7	1.5	1
items retained	3.7	0	2.9	1.3	1.3	1
% retention	41	0	56	77	87	100

Patients were given an average of 19.7 total items and could retain 10.2 or 52%. Although the per cent retention was almost the same as in the study by Joyce and colleagues, our patients were given and could retain twice as much information.

In category A, all patients in the study remembered the rheumatologic diagnosis and at least one item related to prognosis. This category included explanations of joint inflammation and detailed anatomic descriptions, making it difficult, at times, to agree on what constituted a single item of information. This may have contributed to the low retention. Category B included comments about the patient's general health or findings such as an enlarged thyroid or cardiac murmur, thought not directly related to the rheumatologic diagnosis. The recall failure in this category could be on the basis of the patient's overwhelming concern with his rheumatologic problem or may indicate that the interview did not probe this area with sufficient specificity. In category C we arbitrarily considered a medication, its dosage and frequency of administration as one item of information. This lowered the number of items given and retained but did not affect per cent retention. All patients remembered medication correctly with nine out of sixteen referring to written notes given them by the physician. Drug side effects and mode of action were recalled less well. In nine patients, salicylates were given as part of the therapeutic program. Only four out of the nine patients recalled the anti-inflammatory effect of salicylates, a point which was particularly stressed. In category F, as expected, each patient was given one item regarding follow-up care, either to return to the rheumatologist or the referring physician and this was recalled by all the patients.

In evaluating knowledge of rheumatologic terms, we found it more convenient to assign qualitative grades from one to four, since many answers, although not strictly correct, still conveyed good understanding. Results are shown in Table 2.

Table 2

Understanding rheumatologic terms

Qualitative score	Number of patients
4 (greatest comprehension)	4
3	4
2	6
1	2

Grade four was given for the greatest comprehension with the least incorrect information. Per cent recall was approximately the same in each of the four groups, suggesting that patients with greater prior understanding of rheumatologic terms had no better recall than those patients with less understanding. The sample size was too small to determine whether there was a relationship between per cent retention and such variables as duration of illness, educational level and socioeconomic status.

The results must be interpreted with some reserve since in routine examination of patients there is often exchange of information throughout the consultation period rather than just at the conclusion. In addition, the presence of the tape recorder tended to make the physician's discussion more didactic than usual, and all physicians in the study admitted taking more than customary time with their consultations. Nonetheless, results suggest that the amount of information given during a rheumatologic consultation may be excessive for the average patient. Although concrete items such as diagnosis, medication dosage, and diagnostic tests were retained with relative ease, the more abstract concepts in categories A and B should probably be emphasized at subsequent visits and reinformed by written explanatory material as suggested by the recent work of Moll and Wright.[4] Although the present study was limited to patients with rheumatic diseases, it would appear that the communication problem would be similar in dealing with any chronic illness for which symptomatic therapy must be continued for long periods of time.

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THE ADULT RESPIRATORY DISTRESS SYNDROME: THE PREDISPOSING ROLE OF LIVER DISEASE

Donald Sandweiss, M.D.
Brendan Thomson, M.D.

The adult respiratory distress syndrome (ARDS), as defined by Ashbaugh and Bigelow,[1] has been referred to by a number of descriptive pathological terms such as congestive atelectasis[2] and acute hemorrhagic pulmonary edema.[3] It has also been described by a variety of clinical terms including post-traumatic pulmonary insufficiency, stiff lung, traumatic wet lung and shock lung.[4] The syndrome has been associated with trauma,[1] fat embolism,[5] surgery,[6] intra-abdominal catastrophies,[1] viral pneumonia,[7] inhalation of noxious gases,[8] various drugs,[9, 10, 11] cardio-pulmonary bypass[12] and fluid overload.[2]

It is the intention of this report to show that patients with liver disease are predisposed to the ARDS, and to discuss the therapeutic problems associated with liver disease.

CASE MATERIAL

Patients were included in this paper if they manifested liver disease and had clinical or pathological findings compatible with the ARDS. Eight such patients were identified in a one-year period.

Seven patients were American Indians and one, (Case 3) Caucasian (Table 1). Liver disease was confirmed by post-mortem examination in all patients except Case 3 who had clinical findings compatible with viral hepatitis. Six patients developed a well defined intercurrent process which precipitated their respiratory distress (Table 2). In two there was pneumonitis; in one, (Case 3), an intravenous dose of heroin and in three, shock. Other significant findings included anemia, hypoalbuminemia, abnormalities of coagulation and heptic encephalopathy. Case 4 had signs of congestive heart failure prior to death. Four other patients had minimal to moderate cardiac hypertrophy at autopsy (Table 4). However, they never manifested definite clinical signs of congestive heart failure. Three patients were admitted to the hospital with chief complaints of shortness of breath. Their respiratory problems developed during or within twelve hours of heavy alcohol consumption. The remaining five patients were admitted for reasons related to liver disease or infection. They subsequently developed respiratory complications during the course of hospitalization.

TABLE 1
Demographic Data and Liver Disease in ARDS Patients

Patients	Age	Sex	Liver Diagnosis
#1	27	F	Laennec's cirrhosis
#2	26	F	Fatty degeneration secondary to alcohol
#3	23	M	Viral hepatitis
#4	32	F	Fatty degeneration secondary to alcohol
#5	32	M	Fatty degeneration secondary to alcohol
#6	8	F	Viral hepatitis with fulminating necrosis
#7	31	F	Laennec's cirrhosis
#8	57	F	Laennec's cirrhosis

From the Department of Medicine, Phoenix Indian Center, Phoenix, Arizona.

TABLE 2
Data Concerning Intercurrent Conditions in ARDS Patients

Patient	Hematocrit (%)	Albumin (gms. %)	Pulmonary Infection	Shock	Hepatic* Encephelopathy	Overt Bleeding	Prothrombin Time (Sec.)	PTT+ (Sec.)	Platelet Count	Fibrinogen (mgs. %)
#1	30%	3.6	Viral	No	No	No	15	Not measured	Not measured	Not measured
#2	33%	2.4	Pseudo-monas	No	No	Needle punctures	14	32	48,000	12.5
#3	37%	3.0	Pneumo-coccus	No	No	No	17	90	68,000	Not measured
#4	34%	1.9	No	Septic	No	Spontaneous bruising	13	50	20,000	150
#5	48%	4.1	No	Septic	No	No	14	Not measured	Not measured	Not measured
#6	34%	Not measured	No	No	Grade 3	Epistaxis	23	145	85,000	Normal
#7	28%	1.9	No	Septic	Grade 2	Epistaxis	13	37	70,000	68
#8	27%	1.9	No	No	Grade 2	Esophogeal varicies	37	Not measured	74,000	90

*Grading system from Sherlock S: Disease of the Liver and Biliary System, 4th Edition, F. A. Davis Co., Philadelphia, Pa., 1968, Page 106.
+PTT — Partial thromboplastin time: control 32 seconds.

TABLE 3
Data Concerning Respiratory Status in ARDS Patients

Patient	Respiratory Rate	Heart Rate	Temperature (°F)	Lung Exam	Chest X-Ray	Po_2 mmHg	O_2Sat %	Pco_2 mmHg	Ph	O_2Dose	Days on Respirator
#1	50	150	102	Generalized rales	Bilateral alveolar infiltrates	40	79	35	7.47	Room air	0
#2	50	120	103	Generalized rales	Bilateral alveolar infiltrates	40	85	30	7.60	Room air	20
#3	36	130	99	Generalized rales	Bilateral alveolar infiltrates	41	79	39	7.46	10 liters 0_2 Nasal prongs	3
#4	40	140	102	Generalized rales	Normal	70	93	15	7.40	10 liters 0_2 Nasal prongs	0
#5	40	160	105	Normal	Right middle lobe infiltrate	Not measured					0
#6	48	160	104	Bilateral decreased breath sounds	Small bilateral pneumothorax	46	83	28	7.45	Room air	1
#7	22	100	102	Normal	Not done	Not measured				5 liters 0_2 Nasal prongs	0
#8	44	110	100	Normal	Normal	50	91	31	7.60	Room air	0

TABLE 4
Post-Mortem Pulmonary and Cardiac Findings in ARDS Patients*.

Patient	Combined Lung Weight Multiple of Normal	Hyaline Membranes	Heart Weight (gms.)	Left Ventricular Wall Thickness
#1	2.4	Present	420	Increased
#2	1.9	Present	220	Normal
#3	Survived	Survived	Survived	Survived
#4	1.4	Absent	440	Increased
#5	1.6	Absent	540	Not determined
#6	2.0	Present	140	Not determined
#7	2.3	Present	330	Increased
#8	2.0	Absent	340	Increased

*Normal values from Autopsy Manual, Departments of the Army, the Navy, and the Air Force, July 1960.
Normal heart weights: Adult male, 300 gms.; adult female, 250 gms.; 8 year old, 110 gms.
Normal combined lung weight: Adult, 825 gms.; 8 year old, 290 gms.

Tachypnea, tachycardia and fever were universal features (Table 3). Four patients had generalized rales. The chest x-ray in one of these was normal. One patient had a small bilateral pneumothorax induced by closed cardiac massage. The blood gases obtained in six cases revealed marked hypoxemia with hypocapnia or normocapnia.

Case 3 had typical clinical findings of the ARDS precipitated by heroin, and he survived with continuous positive pressure breathing. The remaining seven patients expired after one to twenty days of hospitalization. Two of them were placed on continuous positive pressure breathing with oxygen concentrations between 60-100%. The others were treated with intermittent positive-pressure breathing (IPPB) and/or nasal oxygen. Four patients (Cases 1, 5, 6, 7,) deteriorated rapidly and expired within twenty-four hours.

Seven patients had post-mortem examinations (Table 4). In all cases the lungs were heavy, wet and red. Miscroscopically, they demonstrated patchy atelectasis, capillary congestion and intra-alveolar edema and hemorrhage. Case 2, in addition, had extensive bilateral pulmonary abscesses and organizing pneumonia. Four patients had hyaline membranes. One of these (Case 7) was on nasal oxygen for two hours, the second (Case 1) received nasal oxygen and IPPB, while the other two (Cases 2 and 6) were on volume cycled respirators for one day and twenty-one days, respectively.

DISCUSSION

Contributing Factors

The ARDS is a nonspecific reaction of the lung to various insults. Factors which can initiate or contribute to this condition are hypoxemia, shock, acidosis, fluid overload, fat embolism, vasoactive substances, endotoxemia, pneumonia, noxious gases and various drugs. These factors initiate endothelial and alveolar cell damage leading to increased alveolar-capillary permability, impaired capillary perfusion, decreased surfactant activity and abnormal alveolar surfaces. There is a movement of fluid and cells into the extravascular portions of the lung. In addition, pulmonary vascular resistance increases and atelectasis develops. These changes cause decreased lung compliance ("stiff lung"), adnormalities of ventilation/perfusion, poor gas exchange and hypoxemia. The hypoxemia further contributes to alveolar-capillary cell damage. Thus, a vicious cycle that leads to progressive respiratory failure is established.[8, 13, 14]

There are several reasons why patients with liver disease may be predisposed to the ARDS:

1. Hypoalbuminemia has been noted in patients with shock lung. The presence of pulmonary edema and hyaline membranes is associated with greater degrees of hypoproteinemia. There is also a correlation between the degree of hypoproteinemia and the severity of hypoxemia. It has been suggested that low osmotic pressure, by predisposing to transudation of fluid into the alveolus, aggravates hypoxemia, which, in turn, damages the pulmonary vasculature and leads to further transudation.[15] Paitents with liver disease who have preexisting hypoalbuminemia might be particularly predisposed to this cycle.

2. Among the complications of liver disease are decreased arterial oxygen tension,[16] anemia and hypotension. The hypoxemia resulting from these complications might initiate or contribute to the ARDS.

3. Hypotension and oliguria in patients with liver disease provide possibilities for fluid and crystalloid overload. Aggressive treatment might improve blood pressure and urine output but frequently results in increased peripheral edema and ascites. Some of this fluid might move into the extravascular portions of the lungs. This overload can occur even when central venous pressure and blood volume are normal.[15] The movement of fluid into the extravascular lung occurs at lower central venous pressures than would be required normally because of decreased osmotic pressure from hypoalbuminemia and impaired alveolar-capillary permeability from hypoxemia. The clinician is sometimes confronted, therefore, with the necessity of using intravenous infusions in order to maintain blood pressure and urine output, but at the risk of developing the ARDS.

4. Liver disease is associated with bleeding tendencies which are secondary to platelet abnormalities, deficiency of coagulation factors, increased fibrinolytic activity and diffuse intravascular coagulation. Some of these abnormalities probably contribute to the ARDS. Blaisdale et al have presented evidence suggesting that diffuse intravascular coagulation is an important factor in the pathogenesis of the ARDS.[18] Six of our patients demonstrated significant abnormalities of coagulation, but insufficient studies were performed to accurately define the coagulopathy; and the role of diffuse intravas-

cular coagulation is difficult to assess.

5. Pulmonary edema can develop as a result of a variety of acute brain lesions, including grand mal seizures, in the absence of primary cardiopulmonary disease.[19, 20] The pulmonary edema has been attributed to various neurogenic and cardiovascular responses resulting from central nervous system disease.[19, 21, 22] Hepatic coma reflects severe derangement of brain function and has been associated with elevated intracranial pressure and cerebral edema.[23] One of our patients (Case 6) presented with grade 3 hepatic coma and grand mal seizures. Post-mortem exam revealed marked cerebral edema. Two other patients (Cases 7 and 8) had grade 2 hepatic encephalopathy. It is interesting to speculate that hepatic encephalopathy might initiate reflex pulmonary and cardiovascular changes that promote pulmonary edema. Such changes would contribute to the ARDS.

Alcoholism was the most common cause of liver disease in our patients. Complications of excessive alcohol intake which might predispose to the ARDS are as follows:

1. Chronic alcoholism is associated with beriberi heart disease and chronic cardiomyopathy. Acute alcohol ingestion itself can also cause a reduction in cardiac output.[17] Even mild increases in pulmonary venous pressure resulting from minimal cardiac dysfunction might contribute to the intra-alveolar transudation of fluid. It is possible that mild cardiac decompensation contributed to the ARDS in several of our patients.

2. The alcoholic patient is prone to pulmonary infections and aspiration. Severe acute alcohol intoxication is associated with decreased cough reflex and impaired clearing of airway secretions. A loss of host defense mechanisms and precipitation of cardiac dysfunction might have provided a basis for respiratory distress developing in three of our patients during or shortly after heavy alcohol consumption.

Treatment

The therapeutic challenge in the ARDS is to improve oxygenation, overcome increased ventilatory resistance and minimize capillary leakage. In order to prevent oxygen toxicity, it is important to use the lowest concentration of oxygen necessary to maintain adequate arterial oxygen tension. This may include the use of high flow oxygen, IPPB or continuous positive-pressure breathing with positive end-expiratory pressure, as dictated by frequent blood gas analyses.[1, 6, 8, 24]

The simultaneous use of abumin and furosemide might have a therapeutic role in the ARDS. An increase in serum osmotic pressure and a decrease in capillary hydrostatic pressure reduces intra-pulmonary transudation of fluid. Intravenous albumin is beneficial, therefore, when it increases osmotic pressure, but it may also be deleterious when it increases hydrostatic pressure. The latter disadvantage can be eliminated by the use of furosemide which will reduce the hydrostatic pressure by contracting the intravascular volume.

Any intercurrent factor initiating or contributing to the syndrome should be corrected, including the treatment of pulmonary infection, fluid overload and shock. It has been suggested that corticosteroids are beneficial in the treatment of this syndrome when associated with fat embolism[5] or aspiration pneumonia. Their use under other circumstances has been recommended,[18] but is unproven.

The presence of severe liver disease presents additional therapeutic problems. Care must be taken not to overload the patient with salt and fluid. A careful clinical evaluation is probably more important in assessing fluid requirements than attempting to raise the central venous pressure to arbitrary levels. The need for progressively higher inspiratory pressure to deliver a given tidal volume suggests deterioration of pulmonary status and might be secondary to fluid overload.[25]

In patients with liver disease, potent diuretics can cause renal insufficiency. Lieberman et al have demonstrated that diuretic-induced azotemia in cirrhotic patients is not prevented by infusions of albumin which maintain plasma volume.[26] Therefore, in such patients a regimen of albumin and furosemide must be used cautiously. Their beneficial effect upon the lung must be weighed against their potentially deleterious effect upon circulation and renal function.

Because diffuse intravascular coagulation has been implicated in the pathogenesis of shock lung, treatment with heparin and low molecular weight dextran has been recommended.[18] The use of heparin for diffuse intravascular coagulation in bleeding patients with liver disease has had poor results.[27]

SUMMARY

Eight patients with liver disease had clinical or pathological findings compatible with the

ARDS. The major precipitating factor of the ARDS was shock or pneumonia. Other possible contributing factors were anemia, hypoalbuminemia, cardiac decompensation, fluid overload, coagulation defects and encephalopathy. The therapeutic problems imposed by noncurrent liver disease were discussed. The prognosis of these 8 patients was poor because the underlying causes of the ARDS in combination with severe liver diseases were refractory to management.

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INTRAVENOUS HYPERALIMENTATION— AN IMPORTANT ADJUNCT IN THE TREATMENT OF MEDICAL DISEASE

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Since Dudrick[1, 2] reported a safe and effective method for long-term intravenous nutrition in 1968, parenteral hyperalimentation has become an important modality in treating patients with malnutrition and malassimilation. The maintenance of normal nutritional needs in the face of absent or very little oral intake has long troubled the clinician. Conventional intravenous feeding using 5% or 10% glucose solutions with electrolytes failed to provide sufficient calories to permit utilization of concomitantly administered amino acids unless large volumes of water were also used. Sclerosis of peripheral veins following infusions of high concentration of glucose made this method of intravenous feeding unsatisfactory.

It has been shown in animals and humans that normal growth, weight gain and anabolic state can be achieved by infusing concentrated solutions of dextrose, protein hydrolysates, vitamins and minerals directly into the superior vena cava. Seriously ill surgical patients have so far been the principal beneficiaries of intravenous

hyperalimentation (IVH). It is the purpose of this paper to demonstrate the efficacy of IVH in a variety of medical conditions. An outline of a rational approach to IVH in the community hospital where IVH is not used to any great degree but where most of this country's sick are hospitalized will be given.

INDICATIONS FOR TOTAL PARENTERAL FEEDING

The indications we have used are similar to those of others.[3] Our patients, however, were treated for conditions not amenable to surgery or where it was precluded because of dangerously ill state. When it is obvious that the patient is not responding to oral or tube feeding and gastrostomy or jejunostomy is contraindicated or inadequate, IVH is used. Generally, it has been found to be lifesaving in a variety of clinical conditions, including massive small bowel resection, gastrointestinal fistulas, acute stages of inflammatory bowel disease, severe uncontrolled malabsorption states such as acute and chronic pancreatitis, and obstructing lesions of the gastrointestinal tract when surgical treatment must be delayed because of poor surgical risk. It also has been helpful in maintaining optimal nutrition in patients receiving chemotherapy or irradiation for a variety of malignant diseases. IVH is an expensive, hazardous, time-consuming procedure; but when the indications are clear, it should be started without delay. IVH should not be employed in patients hopelessly ill where there is no possibility of prolongation of useful life. Indications for IVH are outlined in Figure 1.

Indications For Parenteral Nutrition

Malnutrition	Short bowel syndrome
Malabsorption	Protein losing enteropathy
Chronic diarrhea	Non-terminal coma
Chronic vomiting	Malignant disease (adjunctive therapy)
Gastrointestinal obstruction	Alimentary tract fistula
Peptic ulcer disease	Diverticulitis
Granulomatous colitis	Acute and chronic renal failure
Ulcerative colitis	Reversible liver failure
Pancreatitis	Burns
Anorexia nervosa	Complicated trauma or surgery

Figure 1

INSERTION AND MANAGEMENT OF THE HYPERALIMENTATION CATHETERS

Because of hypertonicity of the nutrient solutions, they must be delivered into a large central vein to avoid venous sclerosis and allow rapid dilution into a region of high blood flowrate. The subclavian vein is usually chosen and catheterized after cleansing the shoulder and clavicular area. The insertion site is at the inferior border of the midpoint of the clavicle. Xylocaine is infiltrated into the area. A No. 14 needle with attached syringe is inserted through the anesthetized area under the midpoint of the clavicle with the tip directed toward the jugular notch. The needle is advanced and aspirated. When blood appears in the syringe it is disconnected from the needle and a No. 16 polyethylene catheter inserted approximately 8 to 10 inches into the vein. The catheter is then attached to 5% glucose solution and the infusion begun. The subclavian vein may also be catheterized via the brachial vein using a longer catheter. Once in place the catheter is sutured to the skin and a sterile dressing applied. Roentgen confirmation of the presence of the catheter tip in the subclavian vein is then obtained. A chest X-ray is important to confirm that no pneumothorax has developed during the procedure. After X-ray confirmation of catheter placement, the hyperalimentation solution is infused. The area over the subclavian puncture site is cleaned every three days with tincture of iodine and a sterile dressing applied.[4] The subclavian catheter is used *only* for delivery of the hyperalimentation solution and for no other infusions nor blood sampling. This lessens the chance of contamination and bacteremia.

COMPOSITION OF THE SOLUTION

The hypertonic nutrient solution may be prepared in the hospital pharmacy but in most hospitals the solution is prepared by the nurse immediately prior to infusion. Various hyperalimentation solutions are now available and tend to simplify their preparation.

Figure 2 contains the recommended daily allowances of the various nutrients. Fat emulsions, although an excellent source of calories, are not available for use in the United States, so a dex-

Recommended Daily Allowance of Water, Calories, Amino Acids, Carbohydrates and Fat For Complete Parenteral Nutrition

	Amount per kg of Body Weight per Day to Cover	
	Basal Requirement	High Requirement
Water	25-35 ml	50-60 ml
Calories	25-30	50-60
Amino Acids	1 gm	2 gm
Glucose	2 gm	5 gm
Fat	2 gm	3 gm

Figure 2

Adult Hyperalimentation Solution
Single Unit Method

350 ml 50% dextrose plus
750 ml 5% dextrose in 5% fibrin hydrolysate
Aseptic Mixing Technique

Volume	1,100	ml
Calories	1,000	K cal
Glucose	212	gm
Hydrolysates	37	gm
Nitrogen	5.25	gm
Solium	7	mEq
Potassium	13	mEq

Figure 3

trose and amino acid solution is used. The adult hyperalimentation solution composition in Figure 3 contains 1,000 calories in each 1,100 ml of fluid. Important additions to the infusions are needed (Figures: 4, 5, 6). Their use is dictated by careful monitoring of serum electrolytes. Usually 2 to 4 liters of fluid are given each day; to one unit a vial containing the vitamins listed is added.[5] Several of the available hyperalimentation "kits" already contain these elements in satisfactory amounts. Other available solutions contain few or none of the necessary electrolyte components and it is imperative to add these so that normal anabolism of body proteins may occur from the amino acids and sugar given.

Additions To Each Unit of Base Solution

Sodium (chloride)	40-50 mEq
Potassium (chloride)	30-40 mEq
Magnesium (sulfate)	4-5 mEq

Figure 4

Additions to Only One Unit Daily

Vitamin A	5,000-10,000 USP units
Vitamin D	500-1,000 USP units
Vitamin E?	2.5-5.0 IU
Ascorbic Acid	250-500 mg
Thiamin Hydrochloride	25-50 mg
Riboflavin	5-10 mg
Pyridoxine	7.5-15 mg
Niacin	50-100 mg
Pantothenic Acid	12.5-25 mg

Figure 5

Optional Additions To One Unit

Vit K	5-10 mg
Vit B_{12}	10-30 mcgm.
Folic Acid	0.5-1.5 mg
Calcium Gluconate	4.5-9 mEq
Phosphate (Potassium acid salt)	4-10 mEq

Figure 6

DELIVERY OF THE SOLUTION

The solution is administered at a constant rate 24 hours per day to achieve maximum metabolic efficiency and assimilation of nutrients. A constant-flow propulsion pump is used to ensure an even flowrate.[6] There is little danger of air embolism because the pump used has a photoelectric monitor attached to the drip chamber which is set for a definite number of drops per minute. The pump is also able to shut off flow and sound an alarm if any difficulty develops in the delivery system. This pump has simplified the constant observation of the patient.

PATIENT MANAGEMENT

Prior to the initiation of therapy complete evaluation of the patient is carried out including liver function studies, protein electrophoresis, and in most cases liver biopsy. The initial infusion consists of 2000 ml per 24 hours. Electrolytes, blood urea nitrogen, urinary sugar and volume are monitored frequently and liver function studies done weekly. NPH insulin is given to cover 3 plus and 4 plus urinary sugar reaction but this is usually a problem only in severe pancreatic insufficiency or diabetes. The infusate may be gradually increased to 4000 ml or 5000 ml equivalent to 4000 or 5000 calories depending on the patients' need and tolerance. We have observed nausea and vomiting in almost all patients as the infusion is increased. In patients able to take small amounts of food in addition to hyperalimentation, anorexia is quite pronounced within one or two days after the start of therapy. This may clear within a week or persist during the entire time. Electrolyte imbalance is usually not a problem if replacement has been proper. Good nursing care of the catheter site, close supervision of preparation of solutions and attention to such basic things as daily weight, intake and output make this therapy successful and limit complications.

COMPLICATIONS

Sepsis is the most common complication of hyperalimentation. Both bacteremia and Candida fungemia have been reported. In our 17 patients one episode of streptococcal septicemia developed and was treated without difficulty. Blood cultures should be taken and the catheter removed if bacteremia is suspected. Other complications are outlined in Figure 7. Hyperosmolar hyperglycemia dehydration is a complication which may develop and the rate of glucose infusion must be decreased.

RESULTS OF THERAPY

In evaluating the results of IVH the long- and short-term accomplishments must be considered. Figure 8 outlines the results in 17 patients, their weight gain, disease process and days of therapy. All were quite ill with gross wasting of muscle mass. This was documented with photographs before and after treatment. Without ex-

ception, all had significant weight gain, improvement of gastrointestinal function where this was impaired and were able to undergo major surgery when indicated. Patients with massive small bowel resection were in a moribund condition on admission. After one month of IVH the remaining segment of bowel adapted to the point where they were able to absorb oral calories of sufficient quantity to overcome the severe absorptive defect. All patients with the exception of those with malignancy lose a few pounds after termination of treatment but stabilize at 10 to 15 lbs. above the pretreatment weight. Most patients were followed for 2 months and 10 up to 2 years after treatment. Two patients with pancreatic pseudocysts and pancreatitis had complete X-ray remission of the cysts, weight gains of 23 and 7 lbs. respectively which was maintined 6 months post treatment. Longer follow-up is needed but all benefited sufficiently to justify the expense, time and risk.

Complications of Hyperalimentation

Pneumothorax
Hemothorax
Subcutaneous emphysema
Brachial plexus injury
Subclavian artery injury
Thoracic duct injury
Air embolism
Catheter embolism
Infection and sepsis
Hyperosmolar dehydration

Figure 7

Results of Hyperalimentation

Pt.	Age	Diagnosis	Total Days	Wt. Gain lb.	Av. Wt. Gain/ Day
1. J.A.	45	Pancreatic Insufficiency	32	24.0	0.75
2. R.B.	41	Pancreatitis, Pseudocyst	22	23.5	1.07
3. G.D.	55	Esophageal Stricture	32	19.0	0.59
4. L.D.	74	Sm. Bowel Resection	28	22.5	0.80
5. R.H.	41	Post Gastrectomy	16	10.0	0.62
6. G.H.	76	Sm. Bowel Resection	36	15.0	0.45
7. R.H.	55	Pancreatic Insufficiency	31	19.0	0.61
8. J.M.	49	Post Gastrectomy	19	17.5	0.92
9. E.P.	56	Post Gastrectomy	21	9.0	0.43
10. R.S.	66	Gastric Obstruction	9	12.0	1.33
11. G.Z.	52	Carcinoma CE Junction	23	17.0	0.74
12. H.E.	55	Zollinger-Ellison Synd.	22	13.0	0.60
13. D.H.	58	Post Gastrectomy	22	20.0	0.91
14. C.H.	41	Ulcerative Colitis	20	19.0	0.95
15. W.L.	53	Pancreatitis, Pseudocyst	17	7.0	0.41
16. W.R.	59	Esophageal Stricture	22	12.0	0.55
17. J.B.	57	Pancreatitis, Bil. Fisula	20	12.0	0.60

Figure 8

SUMMARY

A program of parenteral hyperalimentation has been presented which has been used successfully in 17 patients with severe malabsorptive states secondary to a variety of conditions. All showed pronounced weight gain and general improvement of their physical and mental state. They were easier to maintain in a reasonable nutritional status after IVH. It has been shown that IVH is a relatively simple and safe procedure which can be adopted for use in any hospital. It produced positive nitrogen balance in nutritionally starved patients and promoted weight gain. It was used in a variety of medical conditions where ordinary means of nutrition are not beneficial or could not be used.

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PULMONARY EMBOLI
AS CAUSE OF PULMONARY HYPERTENSION

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Over 250 cases have been reported in which recurrent emboli caused massive occlusion of the pulmonary vascular bed leading to pulmonary hypertension. The individual embolic episodes are usually unnoticed, infarction does not often occur and the classic symptoms of chest pain and hemoptysis are lacking. Such patients may not have pleural effusions or lung infiltrates to suggest what is happening in the pulmonary artries. They present as patients with unexplained dyspnea and when the pulmonary hypertension becomes severe enough, as cases of unexplained and intractable heart failure.[1, 2, 3]

Untreated, recurrent pulmonary emboli lead inexorably to death over a period of months or years. It is important to recognize this condition because appropriate therapy can arrest or even reverse the process.

The following case illustrates the typical features of the syndrome and dramatic improvement with fibrinolytic therapy.

CASE REPORT E. D.

This 80 year old white female was admitted to Good Samaritan Hospital (Phoenix, Arizona) on 5-26-72 complaining of anorexia, weakness, aching in her legs and a fifteen pound weight loss over the preceding two months. She also had intermittent dyspnea for the past week. The patient stated she had the "flu" two months prior to admission with fever, muscle aching and malaise. These symptoms subsided in a few days but she felt that she had never regained her health. She denied fever, chest pain, hemoptysis, edema or orthopnea. Her dyspnea came in spells lasting up to 10 minutes and was helped by lying flat and still. She was admitted because of unremitting dyspnea several hours before admission.

The patient had never smoked and denied any past history of heart or lung disease. Physical examination revealed an alert white female who was fatigued and dyspneic. Pulse 104, temperature 96.9, of BP 94/50, respirations 24. There was no cyanosis, clubbing or edema. The heart was not enlarged. A grade II/VI systolic murmur was heard along the left sternal border. The second pulmonic heart sound was accentuated. Lungs were normal. There was a well-healed cholecystectomy scar. Liver and spleen were not palpable. There were non-tender superficial varicosities in both lower extremities. Remainder of

the physical examination was essentially negative.

LABORATORY DATA

Hemoglobin 15.9 Gm%, hematocrit 49%, Wbc 12,900 with normal differential.

Urinalysis: Specific Gravity 1.013, 1+ protein, 50-60 hyaline casts/HPF.

Blood urea nitrogen was elevated to 33 mgm%.

Electrocardiogram revealed right axis deviation and non-specific ST-T changes in the left precordial leads. Vectorcardiogram suggested right ventricular hypertrophy.

Chest X-ray showed abrupt cut off of the right pulmonary artery with a zone of unusual lucency in the right lower lung field.

Arterial Blood Gases showed a PO_2 of 42, pH 7.53, PCO_2 26 indicating a severe degree of hypoxemia with a moderate respiratory alkalosis.

Pulmonary function studies indicated combined obstructive and restrictive ventilatory impairment, the Forced Vital Capacity (FVC) being 1175 ml (53% of predicted) and the Forced Expiratory Volume being 64% of the FVC.

A lung scan using I^{131} MAA (Figure 1) showed markedly decreased perfusion to both lungs.

Cardiac catheterization revealed the pulmonary artery pressure to be 93/18 mm Hg. A pulmonary angiogram (Figure 2) showed massive occlusion of the pulmonary arteries in both lungs, only a small segment of the right upper and left lower lobe showing any contrast material.

Auscultation over the femoral veins with a Doppler Flowmeter revealed no flow on the right, suggesting femoral vein thrombosis.

COURSE OF HOSPITAL

The patient was given Heparin intravenously from the day of admission until 10 June 72.

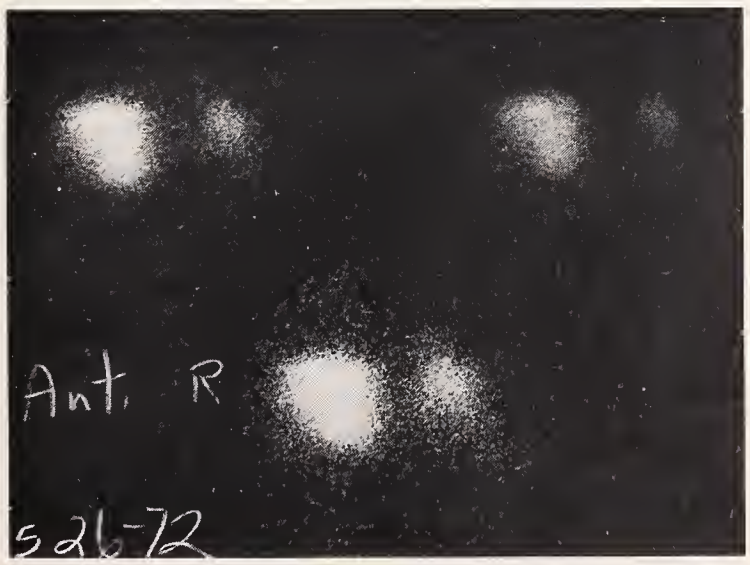


Figure 1



Figure 2

During this time her pulse varied from 80-130 beats/minute and she remained extremely weak, complained of aching in her legs and dyspnea with slight exertion. She developed a left-sided hemiplegia but this subsided in several hours. Repeat lung scan failed to reveal any improvement. She remained severely hypoxemic requiring high flows of oxygen through nasal prongs to maintain adequate oxygenation of the arterial blood. Interruption of the inferior vena cava was refused. The patient failed to improve and her condition appeared critical.

On 10 June 72, 500,000 units of Thrombolysin were given intravenously and this was followed with 250,000 units on the 11th and again on the 12th of June. Following the last infusion, there was immediate subjective improvement with less dyspnea, return of appetite and disappearance of the chronic leg aches. Arterial blood gases showed a striking change, oxygen requirement steadily decreasing until the blood gases were almost normal on 7/19/72. (Table 1).

Table 1
Arterial Blood Gasses

Date	5/26/72	6/9/72	6/12/72	6/18/72	7/19/72
Oxygen Flow	Air	7 Liters/ Min.	7 Liters/ Min.	2 Liters/ Min.	Air
PO_2	42	64	96	72	71
pH	7.53	7.50	7.51	7.41	7.44
PCO_2	26	37	36	41	34

A repeat lung scan (Figure 3) showed a significant increase in lung perfusion, but remained abnormal especially in the left lung.

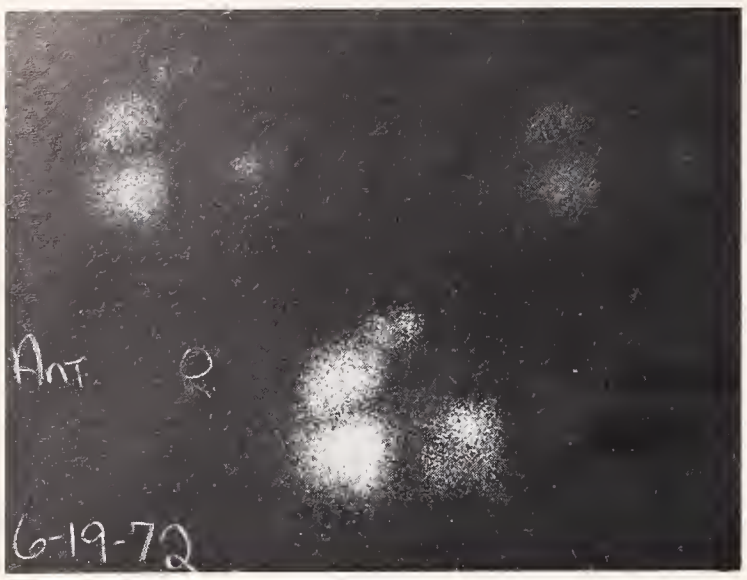


Figure 3

Coumadin was given, and the patient was discharged on 6/27/72. She was re-admitted on 7/10/72 because her hematocrit had dropped to 20% without any source of bleeding being apparent. After blood transfusions, Coumadin was restarted and she was discharged on 7/20/72.

When last seen in November 1972, she was feeling well except for occasional wheezing which was controlled with Aminophylline Tablets. The systolic heart murmur was still present. BUN had returned to normal. The total lung capacity and residual volume had returned to normal.

DISCUSSION

Pulmonary hypertension can be produced experimentally in dogs by repeated embolisation of the lungs. The thrombi then become organized and sclerotic vascular changes occur. A single embolism, however, either leads to immediate death or completely resolves. In our patient, the history suggests that she had pulmonary hypertension for at least two months prior to the onset of her severe and unremitting dyspnea. The latter symptom was probably due to massive occlusion of the larger pulmonary arteries, either from retrograde extension of previous clots lodged in the pulmonary vessels or new massive embolism of the lungs from a peripheral focus. These new clots were undoubtedly the ones which resolved with fibrinolytic therapy. Although the lung scans showed marked improvement after Thrombolysin administration, they remained abnormal, suggesting that there was still considerable vascular occlusion.

Our patient had features which were typical of many of the patients previously described with this syndrome. There is no particular sex incidence and most of the patients are forty years of age or older. All of the patients are dyspneic. Most of them have physical findings, electrocardiographic changes and chest x-rays which suggest pulmonary hypertension. Pleuritic chest pain and hemoptysis are uncommon. Occasionally, syncope or anginal pain due to reduced cardiac output occurs. In our patient, the transient hemiplegia could have been on this basis. Very characteristic of this syndrome is an area of increased radiolucency due to decreased vascularity noted on the chest roentgenogram.

The severe hypoxemia in our patient was unusual.[4, 5] Most of the reported cases have only minor degrees of arterial oxygen desaturation. Since she later had essentially normal blood gas studies and the total lung capacity and residual volume were normal, it is unlikely that she had any significant underlying lung disease. The severe hypoxemia in this case must have been due to the sudden new massive vascular occlusion which led to her admission and which was resolved with fibrinolytic therapy.

Anticoagulation could prevent further thrombus formation and keep patients with pulmonary hypertension from getting worse through further embolisation or extension of clots in previously occluded vessels. Once the thrombi have become organized, it is unlikely that anticoagulants would influence their resolution. Fibrinolytic therapy could help to dissolve recently formed clots and thus reduce pulmonary hypertension. This appears to have been the case in our patient. When the pulmonary vascular occlusion is of long-standing and the patients are symptomatic, a surgical approach with endarterectomy of the involved vessels has been successfully accomplished.[6]

SUMMARY

The case history of a patient with recurrent pulmonary embolism and pulmonary hypertension who was markedly improved with fibrinolytic therapy was presented. The features and treatment of this syndrome were discussed.

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PULMONARY SCANNING IN PULMONARY EMBOLISM

Marcy L. Sussman, M.D.

William J. Crowe, Ph.D.

Pulmonary scanning has become a widely used examination to corroborate or negate the diagnosis of pulmonary embolism. The following is a brief critique of the results, along with a few illustrative cases.

Currently, we study lung perfusion following the intravenous injection of 3 mCi ^{99m}Technetium microspheres. These particles are about 20-40 μ in diameter and accordingly occlude pulmonary vessels smaller than this. The injection is made while the patient is horizontal and at least four views are recorded by a scintillation camera (Anger: Nuclear Chicago) as well as on magnetic tape through a Nuclear Data 50-50 system which includes a dedicated PDP-8 computer.

The perfusion scan is preceded by a ventilation scan made following the inhalation of 20 mCi of ^{133}Xe. Scans are made in inspiration, rebreathe and washout. These tests are made without change in the position of the patient.

NORMAL SCAN

A pulmonary scan cannot be interpreted without a conventional x-ray examination of the chest

Partially supported by a Grant from the Arizona Tuberculosis and Respiratory Disease Association, Inc.

Chairman, Department of Radiology, Maricopa County General Hospital, Phoenix, AZ (Dr. Sussman) BioMedical Specialist, Dept. of Nuclear Medicine, Maricopa County General Hospital, Phoenix, AZ (Dr. Crowe).

made at approximately the same time. The normal scan, therefore, (Fig. 1) includes a chest x-ray showing no relevant abnormalities. The scan shows a uniform and symmetric distribution of activity in both lungs. If the scan is recorded after injection with the patient erect, the lung base will show more activity than the apex, but this disparity is found to a lesser extent when the patient is injected in the supine position. There are no areas of reduced activity except at the left lower chest where the cardiac mass results in lessened activity. The uniformity and symmetry is present both in perfusion and ventilation scans. Washout to half activity occurs in 10-20 seconds and the lungs appear clear of activity by direct inspection in 30 seconds.

PULMONARY EMBOLISM

The classic scan pattern in pulmonary embolism consists of one or more foci of perfusion deficit which conform to anatomic pulmonary segments supplied by the occluded arteries with no corresponding ventilation defects and with no air trapping. (Fig. 2). The chest x-ray examination shows no evidence of recent disease except for vessel "cut-off" which can sometimes be demonstrated on the "plain" film but is better demonstrated by arteriography. The latter procedure does not provide positive proof of the diagnosis,[2] and since the morbidity is significant, we have limited the procedure in the main as a preliminary to embolectomy, in repeated embolism requiring prolonged anticoagulation or where inferior vena caval ligation is considered. Taplin[4] notes that "most episodes of minor pulmonary embolism and many major attacks are

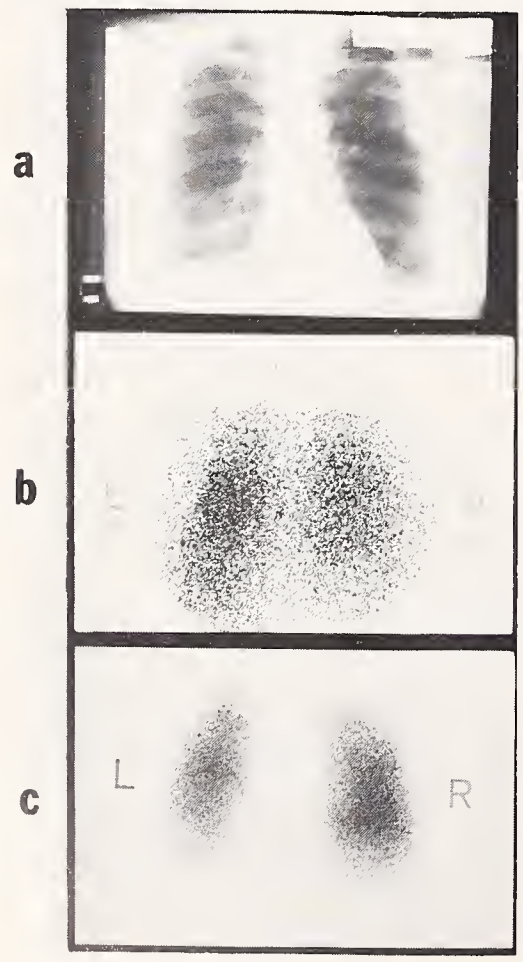


Figure 1
NORMAL CHEST. No radiologic abnormalities (a). Ventilation (b) and perfusion (c) scans show complete filling of air and vascular compartments.

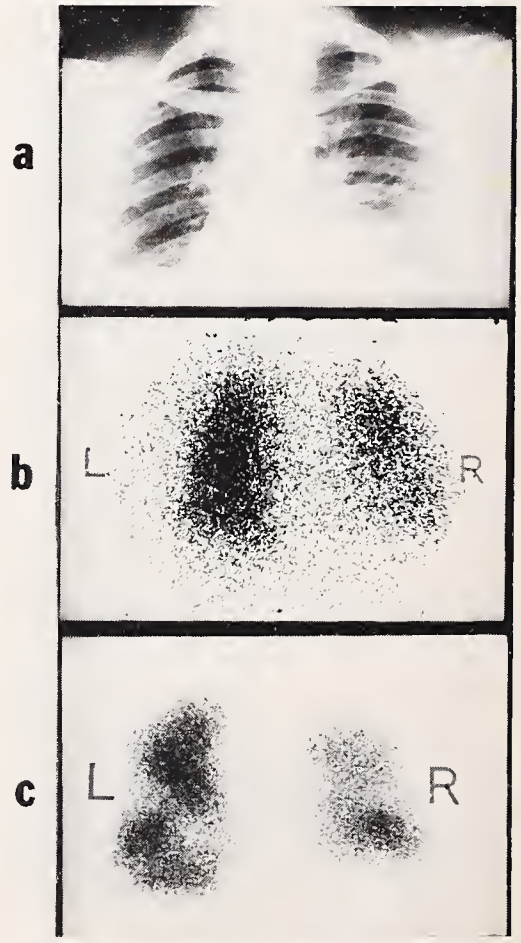


Figure 2
MULTIPLE PULMONARY EMBOLUS. Chest roentgenogram (a) is within normal limits. Ventilation scan (b) shows somewhat less activity in right lung compared with left, but no discrete focal defects compared with wide zone of diminished activity (c) corresponding to the long interlobar fissures and apex of left lower lobe.

nearly asymptomatic and go unrecognized both by patient and the physician. Embolism without infarction of the lung is now considered the rule rather than the exception. Without infarction, chest roentgenography is seldom helpful, and the subtle evidence of embolism is frequently overlooked."

ACCURACY OF DIAGNOSIS

Gilday et al[2] found that 77% of patients with focal anatomic defects showed arteriographic evidence of embolism. Non-anatomic defects rarely correlated with emboli. Only 2% of emboli shown angiographically failed to have an associated lung scan defect. No patient with a normal scan had embolus demonstrated by arteriography. The conclusion was that perfusion lung scanning and pulmonary angiography are complementary procedures. However, lung scanning should be performed first because, in the absence of parenchymal disease by x-ray and by ventilation scan, a perfusion defect with a segmental distribution indicates embolism with a high degree of probability.

We have not subjected our material to statistical evaluation, but our impression is that the Johns Hopkins experience is general. However, we think that our diagnostic accuracy is improved by the ventilation scan, particularly when this shows corresponding defects, since, in general, there is no ventilation deficit in the lung segment involved in embolism.

A perfusion defect means a decrease in arteriolo-capillary flow which may be due to many other causes including, for example, parenchymal infection, atalectasis, cyst, abscess, A-V fistula, chronic obstructive lung disease and asthma. However, in most of these, a ventilation scan shows corresponding defeets, and the x-ray examination reveals positive findings. Fig. 3 illustrates a patient with left lower lobe pneumonia where the parenchymal lesion shows a ventilation defect in precisely the location of a lobar perfusion defect. The lobar involvement in this case of lobar pneumonia is fortuitious; ordinarly there would be no segmental orientation.

It is important to recognize that a redistribution of air with a shift of ventilation away from the unperfused areas to perfused areas may occur. As with perfusion, ventilation in embolism presents in a broad spectrum differing from patient to patient and from area to area in the same patient.

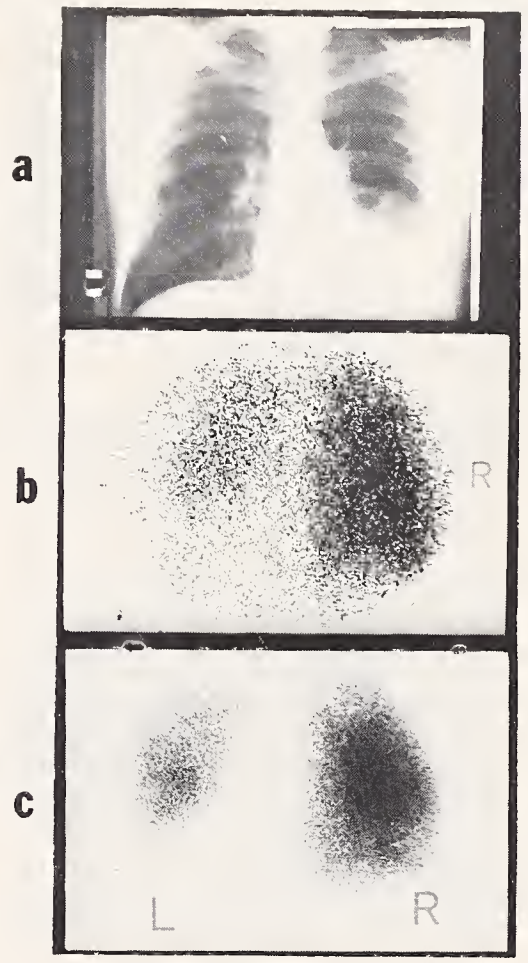


Figure 3

LEFT LOWER LOBE PNEUMONIA. Scans show impaired ventilation of left lung (b) and a corresponding perfusion deficit in the same area of left lower lobe (c).

THE RELATION OF CHRONIC OBSTRUCTIVE LUNG DISEASE

Taplin[5] says that "we have come to realize that a diagnosis of pulmonary embolism based on clinical findings, a normal chest film and a perfusion scan alone has a far lower probability of being correct than was originally believed. The main reason is that obstructive airway disease, which is frequently not revealed in the routine chest x-ray examination, can still produce perfusion scan abnormalities indistinguishable from those found in pulmonary embolism." Obstructive airway disease is frequently overlooked because many of these patients have long periods of remission without overt symptoms while others may well become accustomed to their respiratory disabilities of a chronic nature and do not volunteer such information to the physician. However, the perfusion defects are ordinarily not segmental since they result from partial or total bronchial obstruction with secondary arterial occlusion. The ventilation scan made either following ^{133}Xe inhalation or inhalation of aerosol ^{99m} Tc sulphur colloid usually

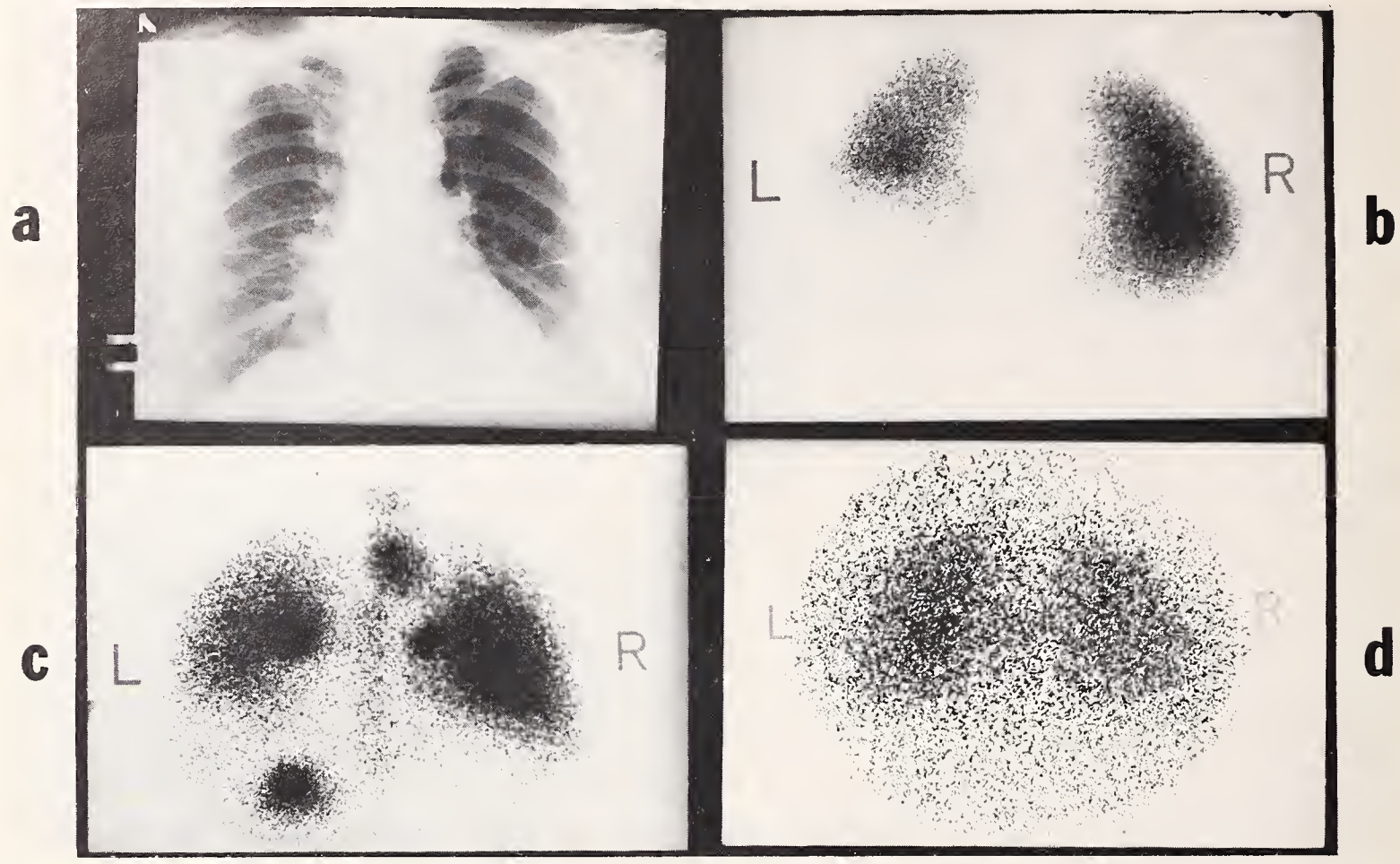


Figure 4
CHRONIC OBSTRUCTIVE LUNG DISEASE. There is hyperlucency of left lung (a). There is a non-focal perfusion deficit at left base (b), with corresponding aerosol (c) and ventilation (d) defects.

will orient the interpretation correctly. Fig. 4).

It has, therefore, become apparent[3] that perfusion defects even in the presence of a normal chest x-ray are not always of vascullar origin. In fact, among the middle-aged and older patients, underlying obstructive airway disease may be a cause of transient regional ischemia. For this reason, we do not emphasize resolution of the abnormal scan as a feature in the diagnosis although this is the most frequent end result.

APPLICATION OF DATA PROCESSING

To improve our definition of a perfusion defect and its relation to ventilation, recently, we have been routinely calculating the V (ventilation)/ Q (perfusion) percentage ratio on a point by point basis throughout both lungs together with its statistical variation. This is done by computer. A rather distinctive pattern has been found in embolism which differs from that in either obstructive lung disease or the normal lung.[1]

DISCUSSION

It is our feeling that pulmonary scanning is in its infancy. There are discrepancies. There are false positives and false negatives. Part of the difficulty is that some diseases are being examined in a new way. The interrelation of a perfusion and ventilation is being examined with new definitions, and on a regional basis. Data processing allows a more quantitative approach. Improved instrumentation and new radiopharmaceuticals will, we are sure, expand the diagnostic horizon and improve the accuracy.

CONCLUSION

An examination of lung perfusion and ventilation scans permits the diagnosis of pulmonary embolism with a fairly high degree of accuracy. A focal segmental perfusion defect with no corresponding ventilation deficit and no air trapping is highly suggestive of this diagnosis but occasionally, false negatives and false positives are to be expected. The combination of pulmonic embolism and obstructive air ways disease constitutes a difficult diagnostic problem.

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THE ARIZONA CHAPTER OF THE AMERICAN COLLEGE OF PHYSICIANS

THE ANNUAL MEETING

The April issue of Arizona Medicine is continuing the tradition of collecting the original presentations from the annual meeting of the Arizona Chapter of the American College of Physicians for a single edition under the editorship of the Governor of the Arizona Chapter, currently Ashton B. Taylor, M.D. Arizona Medicine appreciates the contributions of Doctor Taylor to his specialty and to the members of the Arizona Medical Association.

The Annual Meeting

April will include the annual meeting of the Arizona Medical Association and the meetings of the delegates of its component county medical societies. The degree of membership participation has steadily increased in recent years. This meeting is an excellent opportunity for the physicians and surgeons of Arizona to know each other better, to profit from an excellent scientific program, to see interesting exhibits, to enjoy social events, and to bring to fruition much individual and committee activity which has originated in the grass roots of the association. Arizona Medicine salutes Doctor John Standifer of Kingman, Arizona for his excellent year as President of the Arizona Medical Association. He worked hard, spent a great deal of time and his own money, was always well prepared on a variety of subjects, and conducted the meetings of the Board of Directors with skill and humor.

John R. Green, M.D.

Editor's Page

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John R. Green, M.D.

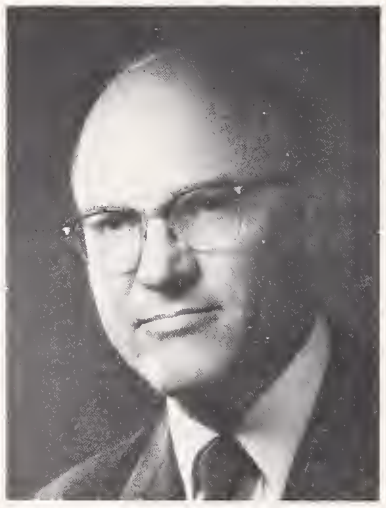
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President's Page



JOHN J. STANDIFER, M.D.
PRESIDENT

PASSING OF THE GAVEL

As this year of ArMA draws near its end, I find myself doing some things for the last time. I have now made my last visit as President to a county medical society. I am presently writing my last President's Page for *Arizona Medicine*. Other obligations and delights of the year will pass with increasing tempo.

It has, for me, been a fantastically exciting and informative year. The simple delight of seeing parts of our state I would probably have never seen and the deep pleasure of becoming better acquainted with so many really fine brothers in our profession are two rewards of great value to me. The high privilege of representing our Association on several occasions leaves me feeling inadequate, but happy for the progressive and intelligent manner in which our affairs have been handled by previous officers of the Association. Knowing our executive staff and their concern for our interests, to the point that their interests and ours merge into one, has been a lesson in dedication.

The time is upon us for a change in leadership. I leave this office with diverse emotions. It has been a joy to serve — it will be a relief to have it over with. My first love is practicing medicine, but it is a little addicting to just talk about it. The excitement of meeting different members of the profession and hearing new ideas is great, but the tranquility of one's own home and family is hard to beat.

One thing I have no ambivalence about is our incoming President, Phil Dew. It gives me great confidence in our future to have him take this office. Dr. Dew was born in Martin's Ferry, Ohio. He received his undergraduate education at Adelbert College and Western Reserve University in Ohio, being elected to Phi Beta Kappa. He was graduated from Western Reserve University Medical School in 1952, served pediatric internship and residency in Cleveland at University and Cleveland City Hospitals, serving as a teaching Fellow in Pediatrics at Western Reserve University when he was chief resident. He moved to Tucson to asociate with Thomas-Davis Clinic in July 1955, and continues to practice there. He has been an Associate in Pediatrics at the University of Arizona College of Medicine since 1969. He has served on numerous community and medical councils and committees, among these being Tucson Community Council as first Vice President and a member of the Board of Directors of the United Community Campaign.

It is obvious that our incoming President is an active and involved citizen of his community. He is an excellent pediatrician. My acquaintance with him has impressed me with his incisive consideration of issues and his dedication to the best possible care of patients. He has worked to preserve the close relationship of doctor to patient and our independence from outside controls. I am most happy to pass the office of President of the Arizona Medical Association to Phillip E. Dew, M.D.

Dean's Page

EXPLORING THE PROBLEM OF PAIN

The Pain Clinic at the University of Arizona Medical Center has been established as a unique referral center for patient therapy and investigation. Management of chronic pain syndromes remains a most difficult and unsatifying problem in the hands of many physicians in spite of tremendous advances in other areas of medicine. When scientific data comparing efficacy of current methods of treatment are compared to the numbers of patients with unresolved pain problems, it is apparent that this area of medicine is in its infancy. Certainly, one of the great difficulties encountered in pain work is the inability to analyze pain objectively in either a qualitative or quantitative manner. Lack of means of objective measurement in this field has frequently hampered adequate treatment of many patients. Patients with chronic pain problems have often been categorized by their physicians as functional or psychoneurotic. This has resulted, in many cases, in therapeutic nihilism, lack of interest, and a feeling of frustration on the part of the treating physician. In fact, lack of ability to treat such patients successfully may threaten and antagonize the doctor.

The overall philosophy of the Pain Clinic contrasts sharply to accepted ideas. In essence, most patients are accepted as having real pain, and attempts are made to treat the pain. Chronic pain *per se* is deemed the initiating factor of many of the psychogenie changes. A host of psychologic and family problems that have occurred secondary to the pain are resolved if the pain is decreased. The Pain Clinic attempts to inform the patient that, even though relief of suffering may not be instantaneous, there is always hope.

What are the problems most commonly referred to the Pain Clinic? Post-laminectomy (nondiscogenic) back pains, cervical and shoulder arthritides, reflex sympathetic dystrophies, atypical headaches, various myofascial syndromes, and patients with metastatic carcinoma, constitute the bulk of the Clinic population. Pain Clinic visits now exceed 100 per month, and many patients are admitted to the Pain Service at University Hospital for intensive care and work-up and consultation with other disciplines. Conservative treatment is the mainstay of therapy. Methods include various forms of counter-irritation, nerve blocks, special medication regimens, physical therapy, elcctrical transcutaneous stimulation, and psychiatric counselling. Acupuncture is being employed on an experimental basis on selccted patients. There is a great deal of current interest in acupuncture brought about by publicity in the lay press. Acupuncture therapy has been employed primarily in post-laminectomy back pains, and in certain chronic headache problems. At times, there has been gratifying relief of pain, but the technique is certainly not a panacea. Controlled research projects are being formulated in order to determine the overall part that acupuncture will play in the practice of medicine. Some 2 - 3% are deemed candidates for various neurosurgical procedures such as thalamotomy, neurectomy, percutaneous cordotomy, or insertion of dorsal column stimulators. Permanent nerve blocks, both somatic and autonomic, are performed with neurolytic agents such as alcohol and phenol.

The Pain Clinic is a multidisciplinary approach treatment facility. Originally conceived and organized by Dr. Burnell R. Brown, Jr., of the Division of Anesthesiology, Department of Surgery, it now includes Dr. Philip Gildenberg, Chief of Neurosurgery, and Drs. James Gumina and Roy Killingsworth of the Department of Psychiatry. Medical students and residents on these services contribute to evaluation and to patient care. A full-time physical therapy technician is present in the Clinic, and extensive use of this important facility is made. All new patients are examined and discussed by the entire staff, and therapeutic procedures agreed upon. Research in pain mechanisms and therapy are a necessary and integral function of the Pain Clinic. Referrals to the Pain Clinic are accepted from physicians throughout the State. It is important that as much data as possible be known about the patient before he is seen in the Clinic, as the problems encountered are complex.

The objective of the Pain Clinic, therefore, is three fold: (1) to treat refractory chronic pain problems; (2) to explore and document scientifically new mcthods of treatment; (3) to disseminate this knowledge to trainees so that it can be widely applied in the community.

Topics Of Current Medical Interest

DISSENTING STATEMENT

PAUL B. JARRETT, M.D.

EDITOR'S NOTE: You will recall that Paul B. Jarrett, M.D. served as a member of the Secretary of Health, Education and Welfare's Commission on Medical Malpractice. He has prepared a dissenting statement to the report of the Secretary's Commission on Medical Malpractice. Your Editor agrees with Dr. Jarrett, will forward his statement to AMA news and recommend that our Delegates continue to actively support these propositions at state and national levels.

The Commission and staff have done yoeman's work in the preparation of this Report. Its members have been earnest, sincere and conscientious. Many of the recommendations are noteworthy; most are helpful, and at worst they are deserving of consideration.

I am persuaded however, that the Report has missed the mark and falls far short of alleviating a situation which is hurtful to patients and the physicians who serve them. We have skated about the periphery of the problem, but have failed to come to grips with it.

It is impossible to not be sympathetic toward recommendations that call for continuing medical education for example, but this is not the crux of the problem. All physicians favor elimination of the incompetent doctor, but this is not the crux of the matter either. Neither is failure of access to patient's records; re-certification or re-registration; absence of patient's representatives, or a State Commissioner of Health Consumer Affairs (the latter in my opinion, would create yet another bureau to share in the health care dollar with little to show for its' existance except acrimony on both sides, and a gaggle of additional tax supported jobs).

The heart of the malpractice problem lies in three directions. One is the invocation of legal doctrines that put the question to the jury without requiring expert testimony that the defendant physician departed from the standard of care in that or a similar community. The second is the tendency by our courts to impose rules of strict liability with warranties of absolute safety and wholesomeness in all things. The third is the use by juries of the physician's malpractice insurance to indemnify patients who have no other source of funds and are in desperate need. However humanitarian this motivation may be, it is not the purpose for which malpractice insurance is carried.

As long as physicians are discriminated against by rules of law that are not applied equally to all segments of society, they must respond defensively to the detriment of society.

The Report by inference places the burden of responsibility for the malpractice situation upon the shoulders of the medical profession, yet the profession is confronted with a paradox which says that the more effectively and specifically they treat their patients, the more they are sued and the less is their personal prestige.

The public suffers when the physician is inhibited from utilizing his own judgment, experience and training in an attempt to help his patients. No thinking person would have the courts establishing the standard of practice rather than the medical profession, yet we are dangerously close to this situation.

The Report tends to maintain the status-quo at a time when health care providers are pleading for respite from non-meritorious litigation. Hopefully, this report may initiate future action that will reverse the current trend. The delay is regretable inasmuch as urgent action was indicated at the time the Commission was appointed.

The following piece appeared in the March issue of **Good Housekeeping,** "Speaker of the House" by Charlotte Montgomery,. Our congratulations to the Women's Auxiliary for their fine work.

LIFESAVING SIGN

The Woman's Auxiliary of the Medical Society in a countv in Arizona has produced what I believe is a truly effective lifesaving sign.

It is a simple plaque, 13 by 18 inches, which, with the help of clear pictures, tells how to carry out mouth-to-mouth resuscitation. To owners of swimming pools, or to people who belong to clubs with pools — in fact, to anyone concerned with safe swimming — I recommend this plaque highly. It should be put up in a spot where it could be instantly turned to in an emergency.

I have seen various other forms of instruction for mouth-to-mouth resuscitation. Wallet cards have been recommended by some safety organizations. But when such information is needed. the fact that it is right at hand could make a big difference. The doctors' wives who sponsor the plaque tell me that a member saved the life of her own child soon after one of these signs was posted in her backyard near the family pool.

The sign is made of rigid vinyl plastic with holes for easy hanging, and it sells for $1.50, including postage.

To order, write to the Safety Chairman, Woman's Auxiliary, Maricopa County Medical Society, 2025 N. Central Ave., Phoenix, Ariz. 85004. Enclose a check or money order.

Letters to Editor

Dear Editor:

For those of us anxious to learn more concerning alternatives to HMO's and PSRO's, your Association publications fail to inform membership of the other side of the coin.

Perhaps material such as the enclosed might offer those of a more conservative bent a degree of encouragement to more effectively resist the bludgeon of politicians seeking to defraud us with the above mentioned three and four letter devices.

Sincerely,
Clare W. Johnson, M.D.

PSRO Is a Four Letter Word

The Bennett Amendment designed to take punitive action against doctors and other health providers, became law when Congress passed HR-1 with the Bennett Amendment or Professional Standards Review Organization (PSRO) as a rider. Significantly, Congress did not get a chance to vote on PSRO itself, but only on the freight train bill, HR-1, with its multiple peculiar riders. Each member of OSMA is urged to become intimately familiar with PSRO because:

1. It is a bad program which cannot possibly accomplish its objectives of promoting effective, efficient, and economic delivery of health care services of proper quality.

2. It will entail further endless bureaucratic harrassment to practicing physicians, who are already distracted enough by bureaucracy. It will, in fact, decrease efficiency of physicians by an endless number of inquiries and reports after the fact with built-in retrospective denials that the psyician has to pay for up to $5,000. Have you noticed that bureaucrats or Junior G-Men have 20-20 hindsight?

3. It will surely increase the cost of medical care since the costs of administering the program will necessarily create a vast new bureaucracy. It will compound the shortage of physicians since sizeable numbers will have to be taken out of patient service in order to administre PSRO, and decrease working effectiveness of physicians doing patient service because of the additional time wasted on reports, answering inquiries, and attending judicial reviews.

4. It will not increase the quality of medical care, but will attempt to change private personalized health services into dehydrated computerized fittings of square pegs into round holes, with the holes varying in size, shape, and location at the discretion of the Secretary of HEW and his famous regulators. In addition, it will lower quality by making physicians practice increasingly defensive medicine.

5. In rural areas, where there is already a physician shortage, and where a large percentage of patients are on Medicare or Medicaid, it will compound the physician shortage by making rural practice even less attractive. The overall physician shortage will be increased due to the fact that many physicians would find practice under PSRO so unpleasant that they will retire.

6. It will pave the way for National Health Insurance. The Federal government cannot possibly afford NHI or socialized medicine until they get absolute control over practicing physicians through a mechanism like PSRO.

7. Although nominally under medical control, actual control of PSRO would be out of our hands as regulations are developed along the way and at the onset by PSRO advisory groups.

My Proposal: Non-Compliance!!

If we refuse as a group to be PSROed by anyone, the Federal Government has the option of discontinuing Medicare and Medicaid. It is not probable that they will do this because it would work a hardship on recipients. What other recourse would the government have but to make some acceptable bargain with us for care of Medicare and Medicaid recipients? We should be prepared for a decline in income. If we get PSROed, be prepared for a decline in income permanently.

If you share my low opinion of PSRO and the disastrous effects on the American doctor, please study PSRO, arrange debates at your county medical society meetings, encourage your fellow physicians to understand PSRO, and send your delegates to the annual meeting instructed to vote against compliance. If OSMA votes for non-compliance, you can be sure that many states will follow suit and Congress will have to recognize PSRO as an unworkable concept. Congress can then negotiate with us for measures to accomplish proper objectives.

S. R. McCampbell, M.D.

EDITOR'S NOTE:

We agree with Dr. Johnson's concern and are pleased to publish Dr. McCampbell's editorial. The realities of politics and medical care have apparently led the American Medical Association to back off from its opposition to Professional Standard Review Organizations (PSRO) at the recent clinical convention in Cincinnati and to endorse "a dominate role of leadership in the implementation of the PSRO program." The AMA House of Delegates voted to establish an advisory Committee on PSRO to act as the medical profession's advocate to insure proper implementation of HR-1, now Public Law 92-603, which orders PSROs be created as soon as possible after January 1, 1974. This issue will be debated at our Annual Meeting in April and the members should review the data (see **Arizona Medicine,** December 1972, pp. 934-944); attend the PSRO session and "become involved."

"PSRO is a Four Letter Word," Journal of Oklahoma State Medical Association, Vol. 66, No. 1, Jan. 1973. Reprinted with permission.

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

LEGISLATIVE COMMITTEE

Meeting of the Legislative Committee of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, on Sunday, January 21, 1973, a quorum being present, convened at 10:12 a.m., Richard O. Flynn, M.D., Chairman, presiding.

INTRODUCTION OF GUESTS

Dr. Flynn introduced the guests and welcomed their comments on any proposed legislation considered during the meeting.

DEFINITION OF TERMS

It was determined that the Committee would continue utilizing the following definition of terms:

ACTIVE SUPPORT: Means approval of bill and maximum staff time and financial expenditures (including legal counsel) will be made to achieve enactment.

GENERAL SUPPORT: Means approval of the principle of the bill but that staff time and financial expenditure will be limited.

NO ACTION: Means no position has been taken one way or the other on the bill.

NONSUPPORT: Means disapproval of this bill but that staff time and financial expenditure will be limited to defeat the bill.

ACTIVE NONSUPPORT: Means disapproval of bill and that maximum staff time and financial expenditures (including legal counsel) will be expended to achieve defeat of the bill.

CONSIDERATION OF PROPOSED LEGISLATION

Proposals Submitted by the Arizona State Department of Health

S.B. 1017 – Health Laws Violation Procedures.

This act classifies certain violations as misdemeanors and provides for cease and desist orders for nuisances and practices contrary to health laws or regulations permitting the state health commissioner or local health department to apply to the Superior Court for an injunction without such orders.

IT WAS MOVED AND CARRIED TO GIVE SENATE BILL 1017 GENERAL SUPPORT.

Providing for Isolation and Quarantine Order by Sheriff

The purpose of this act is to provide procedures for the service of isolation and quarantine orders issued

by the state tuberculosis control officer and to provide transportation to isolation facilities.

IT WAS MOVED AND CARRIED TO GIVE GENERAL SUPPORT TO THIS PROPOSED LEGISLATION.

S.B. 1070 — Air Pollution Permit Considerations

Senate Bill 1070 provides exemptions for required air pollution permits extending the total term for renewal of a conditional permit and prescribing considerations for permit procedures in air pollution control and authority to present evidence in transportation matters.

IT WAS MOVED AND CARRIED TO REFER SENATE BILL 1070 TO THE PROFESSIONAL COMMITTEE'S POLLUTION CONTROL COMMITTEE FOR FURTHER STUDY.

Clinical Laboratory Licensing Fees

A request for relief from the present fee collection for clinical laboratory licensing at such amounts as would make the program self-supporting was considered. In view of the limitations by the statutes on the amount of fees that can be collected, the self-supporting phase seriously limits the licensing program. It is recommended that either the fee limits be stricken or the self-supporting phase be stricken. Three proposed pieces of legislation were reviewed.

1. An act to repeal or terminate the authority for the Department of Health to collect fees for clinical laboratory licenses.

IT WAS MOVED AND CARRIED TO NOT SUPPORT THE REPEAL OF THE ACT.

2. Removing limitations on the amount of fees set by the Board of Health for clinical laboratory license applications and inspections from the statutes.

IT WAS MOVED AND CARRIED TO NOT SUPPORT THIS ACT PROVIDING FOR THE REMOVAL OF REQUIRED SPECIFIED FEES.

3. Proposed legislation removing the requirement that the clinical laboratory division be self-supporting.

IT WAS MOVED AND CARRIED TO OFFER GENERAL SUPPORT TO PROPOSED LEGISLATION REMOVING THE REQUIREMENT THAT THE CLINICAL LABORATORY DIVISION BE SELF-SUPPORTING.

S.B. 1069 — Water Pollution — Monitoring Sources

There was a considerable amount of discussion regarding Senate Bill 1069 which authorizes the Arizona State Department of Health to require monitoring of water pollution sources and providing for confidentiality of records. There was a certain amount of support from the Committee that the industry which may be a polluting source to the water supply be required to bear the cost of monitoring; however, it did not appear to be consistent that they accomplish the monitoring as well. There was also some concern expressed regarding the confidentiality section of the bill, as the public should be made aware of causes of pollution to its water supply.

IT WAS MOVED AND CARRIED TO REFER SENATE BILL 1069 TO THE PROFESSIONAL COMMITTEE'S POLLUTION CONTROL COMMITTEE FOR THEIR CONSIDERATION.

H.B. 2044 — Insurance — Health Maintenance Organizations

H.B. 2044 provides for authorization of health maintenance organizations and defines a health maintenance organization and comprehensive health maintenance service; prescribes licensing requirements for agents soliciting subscribers for HMO's; prescribes deposit requirements for hospital service corporations, medical service corporations, and HMO's; and prescribes that health maintenance organizations receive permits from the State Department of Health as a prerequisite to building or modifying facilities.

There was a considerable amount of discussion expressed on the advisability of House Bill 2044 specifying under definitions that health maintenance organizations would include a comprehensive health maintenance serviee so broad so as to stop the HMO concept. There was concern expressed that the amount of deposit for protection of members for a newly formed HMO amounted to $150,000, as well as the total deposit of $250,000, may keep small groups of physicians from forming HMO's, as it would be far too expensive for them.

IT WAS MOVED AND CARRIED TO TAKE NO ACTION ON HOUSE BILL 2044; HOWEVER, THAT THE ASSOCIATION CONTINUE TO SUPPORT THE PLURALISTIC HEALTH CARE SYSTEM.

S.B. 1063 — Making Quakery Unlawful

Senate Bill 1063 introduced by Senator Alexander defines as an unlawful practice any false or misleading claim of a medical cure.

IT WAS MOVED AND CARRIED TO OFFER GENERAL SUPPORT TO SENATE BILL 1063.

Professional School Accreditation

A sample bill received from AMA providing that applicants to practice podiatry, chiropractic, dentistry, medicine, naturopathy, optometry, and osteopathy, be graduates of schools accredited by an accrediting agency recognized and approved by the National Commission on Accrediting and the United States Office of Education, U. S. Department of Health, Education, and Welfare, was considered for introduction. The Committee was informed that legislative counsel was drafting a bill in proper form on behalf of Senator Alexander. There was concern expressed with the language of the sample bill and its appropriateness to the medical and osteopathic practice acts.

IT WAS MOVED AND CARRIED TO GIVE GENERAL SUPPORT TO THE INTRODUCTION OF LEGISLATION PROVIDING THAT APPLICANTS TO PRACTICE BE GRADUATES OF ACCREDITED SCHOOLS; FURTHER, THAT LEGAL COUNSEL CONSIDER THE PROPOSED LEGISLATION PRIOR TO INTRODUCTION.

H.B. 2008 — Health Care Institutions; Financial Records

The purpose of this act is to require that all licensed health care institutions account to the public and to the legislature for their rates, charges, and services. This act prescribes forms and contents of financial statements, schedules, and reports to be submitted by health care institutions to the Attorney General for audit purposes and to the State Department of Health and authorized local agencies for their review of rates and charges. Such reports will permit necessary comparisons among various classes of health care institutions providing the

same or similar services. The act also requires public disclosure of information.

Representatives of the Arizona Hospital Association informed the Committee that they approved of the concept of House Bill 2008; however, they disapprove of the state auditor general auditing the private health care institutions. They further informed the Committee that they were working on amendments to the bill with Mr. Barr and Mr. Adams and would like to come back to the Association with their position.

IT WAS MOVED AND CARRIED TO RECEIVE H.B. 2008 FOR INFORMATION ONLY.

Department of Commerce

It is anticipated that a bill establishing the Department of Commerce will be introduced during this legislature. The purpose of the Department of Commerce is to consolidate the administrative activities of all boards and agencies under the responsibility of a director. The boards themselves would retain their autonomy and are not under the direction of a department director but continue to set the policies of regulation, service, and licensing as presently called for under practice statutes The Department functions in an administrative capacity at the direction of boards. The Board of Medical Examiners would be involved in this Department with 38 other boards and agencies.

IT WAS MOVED AND CARRIED TO ACTIVELY OPPOSE THE DEPARTMENT OF COMMERCE LEGISLATION.

H.B. 2004 — Department of Health Services

The purpose of House Bill 2004 is to provide an integration of health services, reducing duplication of administrative efforts, services, and expenditures through planning and coordination establishing a Department of Health Services to be administered by a director and providing for the transfer of the powers of duties of the State Department of Health, Arizona State Hospital, the Arizona State Board of Crippled Children's Services, the Arizona State Department of Mental Retardation, and the Division of Occupational Health and Safety of the Industrial Commission, to the Department of Health Services.

The Legislative Committee was informed that this bill was introduced only as a vehicle to study the reorganization of the State Department of Health and other agencies having responsibilities for health into a single Department of Health Services.

IT WAS MOVED AND CARRIED TO RECEIVE HOUSE BILL 2004 FOR INFORMATION ONLY UNTIL MORE INFORMATION IS KNOWN ABOUT THE LEGISLATIVE INTENT.

Health Services Manpower Commission

The purpose of this act is to bring together under a health services manpower commission all autonomous licensing and regulatory policies for health personnel. It consolidates staff and location and provides that the health services manpower commission oversee numbers, education, training, duties, and performance, as well as providing for the orderly growth of present and future allied health services personnel. The commission forbids a licensed specialty from exceeding its legal limitations. The commission also provides a viable mechanism through which the state can help fund costs of medical education, many of which are now being borne by the paying hospital patient.

IT WAS MOVED AND CARRIED THAT NO ACTION BE TAKEN AT THIS TIME AWAITING ADDITIONAL INFORMATION FROM THE SPONSORS.

H.B. 2089 — Transfer of Sanatorium

House Bill 2089 provides for the transfer of the State Sanatorium property to the Board of Crippled Children's Services to provide hospital care for state children's services, as the Sanatorium has not been occupied to its capacity since it opened in 1964. Carl Diener, M.D., President of the Arizona Thoracic Society, informed the Committee that the proposal was an appropriate undertaking.

IT WAS MOVED AND CARRIED TO OFFER GENERAL SUPPORT OF HOUSE BILL 2089.

Hypodermic Syringes and Needles

It is anticipated that legislation will be introduced providing limitations on the sale of hypodermic syringes and needles and the manner in which they can be stored and discarded. The Pima County Medical Society forwarded correspondence by the Town and Desert Woman's Club of Tucson indicating that they are pursuing this matter vigorously and requesting the Legislative Committee to consider legislation of this nature. The Legislative Committee was informed that legislation has been introduced the past two sessions covering the sale, storage, and manner in which hypodermic syringes and needles may be disscarded without success.

IT WAS MOVED AND CARRIED TO OFFER GENERAL SUPPORT TO PROPOSED LEGISLATION COVERING HYPODERMIC SYRINGES AND NEEDLES.

Authorized Use of Acupuncture

Proposed legislation supported by the Board of Directors during meeting held November 19, 1972, to be introduced by Representative Craig Davids was reviewed. The intent of the legislation is to add, by amendment, to the Medical Practice Act, 32-1421, paragraph 10, "The performance of acupuncture by any person under the supervision of a doctor of medicine in an approved medical school or any research facility approved by the Board of Medical Examiners for the primary purpose of scientific evaluation. Any medical school or any research facility approved by the Board of Medical Examiners which conducts acupuncture research under this paragraph shall annually, during the first week of the legislative session, submit a report to the President of the Senate and Speaker of the House on such research, indicating quantified results, the suitability of acupuncture as a therapeutic technique, and performance standards for persons practicing acupuncture."

Mr. Jacobson expressed concern that designating a specific therapeutic modality in the Medical Practice Act was cause for concern. Further, that the intent of this legislation may be affected by the Board of Medieal Examiners through rules and regulations rather than legislation.

IT WAS MOVED AND CARRIED TO REFER THE PROPOSED LEGISLATION BACK TO THE BOARD OF MEDICAL EXAMINERS FOR THEIR RECONSIDERATION

H.B. 2017 — Driving While Intoxicated

House Bill 2017 prescribes that driving with 0.10 per cent by weight of alcohol in blood is unlawful rather than presumption.

IT WAS MOVED AND CARRIED TO GENERALLY SUPPORT HOUSE BILL 2017.

Posting $2500 Bond in Malpractice Suits

The Arizona Hospital Association by letter to the Pima County Medical Society suggested that legislation be introduced which would require the posting of a security cash deposit or bond as security for the payment by the plaintiff of all costs and reasonable attorney fees incurred by the defendant in defending medical malpractice action if the plaintiff fails to recover any damages such as was passed in California in early 1972. The Hospital Association suggested that they would support the Medical Association if we desired to have such legislation introduced.

IT WAS MOVED AND CARRIED THAT NO ACTION BE TAKEN IN INTRODUCING LEGISLATION ON MALPRACTICE DUE TO THE POSSIBLE BAD PUBLIC RELATIONS IT COULD BRING TO THE ASSOCIATION AND DEFER THIS CONSIDERATION FOR ONE YEAR.

H.B. 2053 — Catastrophic Medical Cost Insurance Plans

House Bill 2053 directs the Arizona Legislative Council to develop, or contract for the development of, plans for insuring citizens of Arizona against catastrophic medical cost bankruptcy, and making an appropriation for the purpose of contracting for professional services to plan or study catastrophic medical cost insurance.

IT WAS MOVED AND CARRIED TO GENERALLY SUPPORT HOUSE BILL 2053.

Optometric Continuing Education

Proposed legislation was reviewed in which the Optometric Act would be amended to include continuing education of not less than 12 hours of educational courses related to health care approved by the Board of Optometry for recertification. There was discussion regarding courses relating to "health" care rather than "optometric" care.

IT WAS MOVED AND CARRIED TO ACTIVELY SUPPORT CHANGING "HEALTH" CARE TO "OPTOMETRIC" CARE.

H.B. 2044 — Health Information Center

House Bill 2044 establishes within the Arizona Health Planning Authority a state center for health information for the purpose of collecting, analyzing, and disseminating health-related statistics and other information for this state. The same legislation was introduced and supported by this Association during the past two sessions.

IT WAS MOVED AND CARRIED TO GENERALLY SUPPORT HOUSE BILL 2044 AND TO SEEK AN AMENDMENT TO INCLUDE PHYSICIANS ON THE ADVISORY COMMITTEE AS RECOMMENDED BY THE ARIZONA MEDICAL ASSOCIATION.

Certifying Radiologic Technologists

Proposed legislation to establish standards of education, training, and experience and to require the examination and certification of operators of X-ray equipment was reviewed. Dr. Van Buskirk representing the Arizona Chapter, American College of Radiology, informed the Committee that they had endorsed an earlier draft of this proposed legislation; however, the American College of Radiology had suggested a moratorium on licensing and certification. It was suggested that they would reconsider their action in light of the suggested moratorium.

IT WAS MOVED AND CARRIED TO NONSUPPORT THE REQUIREMENT OF EXAMINATION AND CERTIFICATION OF OPERATORS OF X-RAY EQUIPMENT.

Controlled Substances Act

The Uniform Controlled Substances Act would create a coordinated and codified system of drug control, which classifies all narcotics and dangerous drugs subject to control into five categories with each schedule having its own criteria for drug placement and provides law enforcement tools to improve investigative efforts. The Committee was informed that many amendments are being made to the Uniform Controlled Substances Act prior to introduction that have not been studied to this date.

IT WAS MOVED AND CARRIED TO REFER THE CONTROLLED SUBSTANCES ACT TO THE SECTION ON DRUG ABUSE, PROFESSIONAL COMMITTEE, FOR THEIR CONSIDERATION AND RECOMMENDATION.

S.B. 1067 — Insurance — Psychologist's Services Benefits

Senate Bill 1067 provides that benefits for services performed by a certified psychologist shall not be excluded from disability insurance contracts and group disability insurance contracts. An individual shall have freedom of choice to select either a physician or a duly certified psychologist.

IT WAS MOVED AND CARRIED TO REFER SENATE BILL 1067 TO THE SECTION ON MENTAL HEALTH, PROFESSIONAL COMMITTEE, FOR THEIR CONSIDERATION AND RECOMMENDATION.

Family Planning

Proposed legislation providing for family planning, including all medically accepted family planning methods and information to any person who requests such service or information regardless of sex, race, age, income, number of children, marital status, citizenship, or motive, was reviewed.

IT WAS MOVED AND CARRIED TO OFFER GENERAL SUPPORT OF THE PROPOSED LEGISLATION.

Professional Services Procurement Act

Legislation being considered for introduction by the Council of Professions, which prohibits contracting for services by professions by competitive bidding, was reviewed.

IT WAS MOVED AND CARRIED TO GENERALLY SUPPORT THE INTRODUCTION OF THE PROFESSIONAL SERVICES PROCUREMENT ACT.

Meeting adjourned 4:37 p.m.

Edward Sattenspiel, M.D.
Secretary
by
Gary L. Barnett
Associate Executive Director

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

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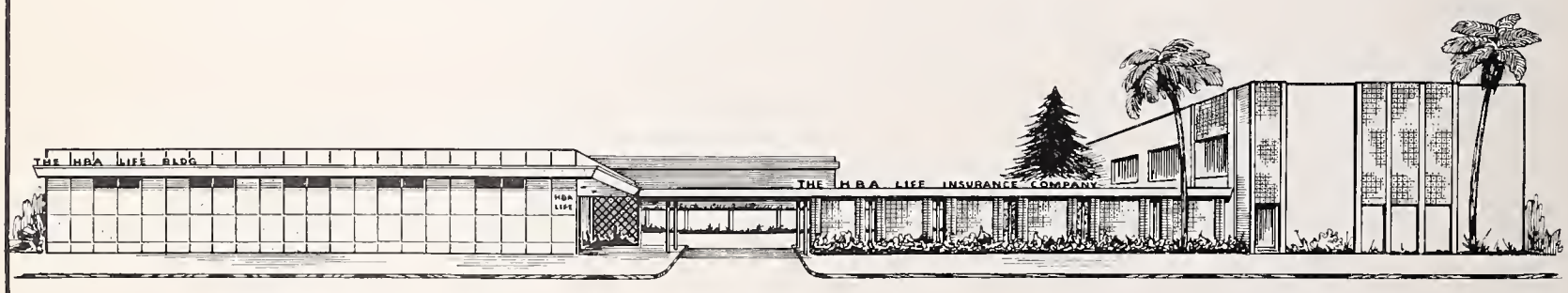
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APPLICATION TECHNIQUE: TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement. It dissolves and facilitates the removal of necrotic tissues and purulent exudates.

TRAVASE enzymes are selective. Virtually inactive on viable tissue.

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(Ulcer being irrigated) Thoroughly cleanse and irrigate the wound area using **only** sterile water or sodium chloride solution. Be sure to cleanse the wound of any antiseptics or heavy-metal antibacterial agents which may interfere with the enzyme activity.

Thoroughly soak the wound area. Where practical, tubbing or showering is suitable. Or wet soaks with gauze pads may be used. Remember to avoid chemical cleansing agents which may interfere with the therapy.

With a sterile cotton swab or finger cot, apply a very **thin** layer of TRAVASE Ointment. The ointment spreads easily and only a small amount is needed (a small dab of ointment will cover an area as big as the back of a hand).

Be sure, though, to rub the ointment well into every crack or crevice of the wound and overlap the surrounding skin one-fourth to one-half inch beyond the area to be debrided—to be sure of complete coverage.



Apply loose, wet dressings, thoroughly soaked in sodium chloride solution or sterile water to the area to be debrided only.

Cover the moist dressings with an occlusive wrap (Saran wrap, Telfa Pads, or other plastic wrappings) to keep wound site moist. Do not extend occlusive wrap over ½ inch beyond area to be debrided.

When changing dressing, gently wipe away the dissolved material. Repeat the complete dressing procedure, including application of TRAVASE Ointment, four times daily.

The ulcer shown in these photos is simulated on a model in order to demonstrate the correct TRAVASE application technique.

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DESCRIPTION: TRAVASE® (brand of sutilains) Ointment is a sterile preparation of proteolytic enzymes, elaborated by **Bacillus subtilis**, in a hydrophobic ointment base consisting of 95% white petrolatum and 5% polyethylene. One gram of ointment contains approximately 82,000 casei units* of proteolytic activity.

ACTION: TRAVASE Ointment selectively digests necrotic soft tissues by proteolytic action. It dissolves and facilitates the removal of necrotic tissues and purulent exudates that otherwise impair formation of granulation tissue and delay wound healing (4).

At body temperatures these proteolytic enzymes have optimal activity in the pH range from 6.0 to 6.8.

INDICATIONS: For wound debridement (1,2)—TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

Second and third degree burns,
Decubitus ulcers,
Incisional, traumatic, and pyogenic wounds,
Ulcers secondary to peripheral vascular disease.

CONTRAINDICATIONS: Application of TRAVASE (brand of sutilains) Ointment is contraindicated in the following conditions:

Wounds communicating with major body cavities,

Wounds containing exposed major nerves or nervous tissue,

Fungating neoplastic ulcers,

Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fet

Do not permit TRAVASE Ointment to come into contact with the eyes. In treatment of burns or lesions about the head or neck, shou the ointment inadvertently come into contact with the eyes, the eyes sh be immediately rinsed with copious amounts of water, preferably sterile

PRECAUTIONS: A moist environment is essential to optimal activity of t enzyme. Enzyme activity may also be impaired by certain agents. In vit several detergents and antiseptics (benzalkonium chloride, hexachlorophene, iodine, and nitrofurazone) may render the substrate indifferent to the action of the enzyme (3). Compounds such as thimero containing metallic ions interfere directly with enzyme activity to a slight degree, whereas neomycin, sulfamylon-streptomycin, and penicill do not affect enzyme activity. In cases where adjunctive topical therap has been used and no dissolution of slough occurs after treatment with TRAVASE Ointment for 24 to 48 hours, further application, because of interference by the adjunctive agents, is unlikely to be rewarding.

In cases where there is existent or threatening invasive infection, appropriate systemic antibiotic therapy should be instituted concurrentl

Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response ir humans to absorbed enzyme material.

ADVERSE REACTIONS: Adverse reactions consist of mild, transient pa paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurr

If bleeding or dermatitis occurs as a result of the application of TRAV (brand of sutilains) Ointment, therapy should be discontinued. No syst toxicity has been observed as a result of the topical application of TRAVASE Ointment.

Dosage and Administration

STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFEC RESULTS OF TREATMENT

1. Thoroughly Cleanse and Irrigate Wound Area with sodium chl or water solutions. Wound **MUST** be cleansed of antiseptics o heavy-metal antibacterials which may denature enzyme or alte substrate characteristics (e.g., Hexachlorophene, Silver Nitrat Benzalkonium Chloride, Nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, show or wet soaks (e.g., sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate co with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

How Supplied

3P3002 TRAVASE Ointment is supplied sterile in one-half ounce tub (14.2 g.) containing 82,000 casein units of sutilains per gran hydrophobic ointment base.

The ointment must be stored under refrigeration at 2° to 10° C (35° to 50° F).

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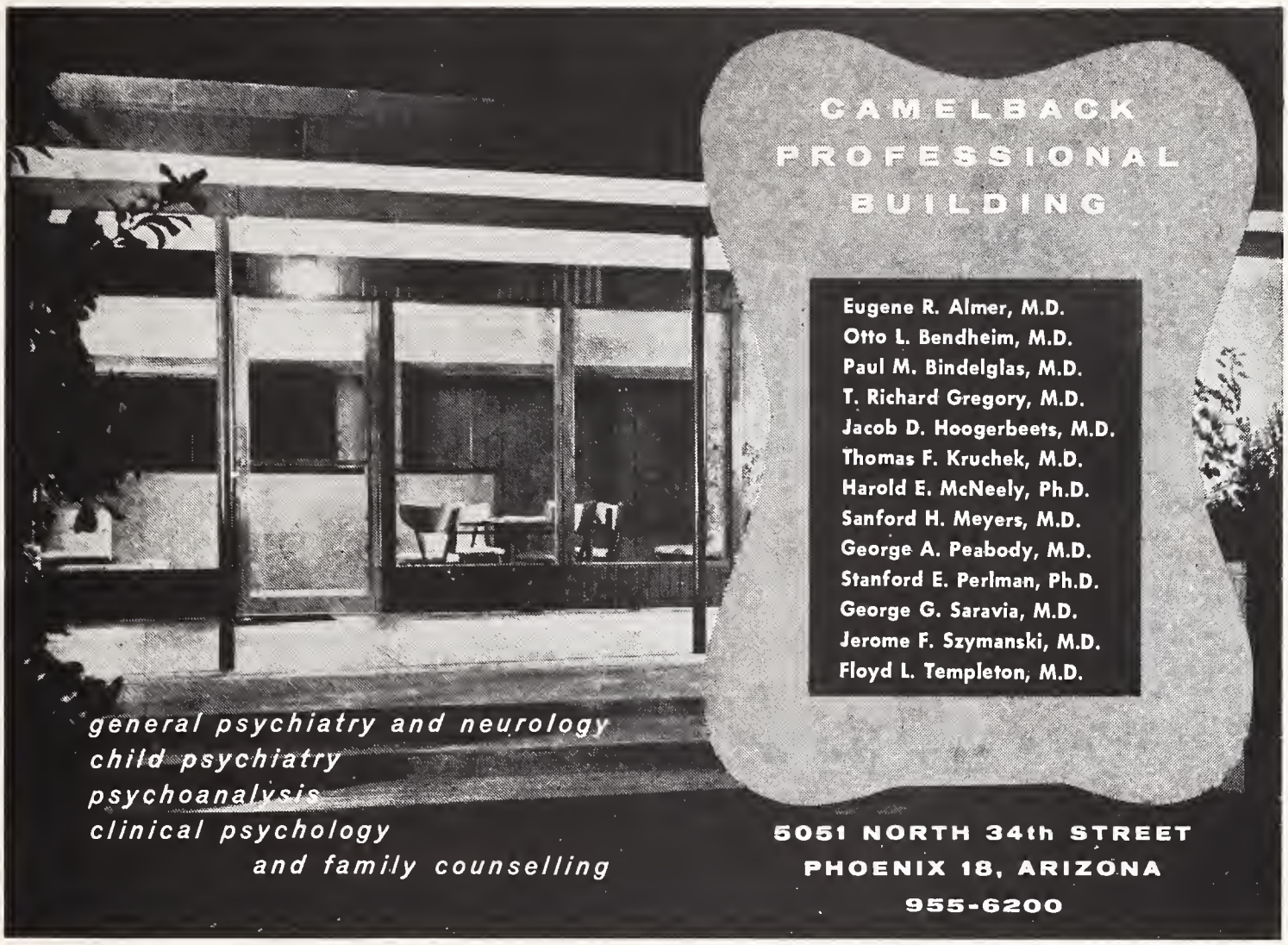
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*A casein unit is the amount of enzyme required to produce the same optical density at 275 mμ as that of a solution of 1.5 mcg. tyrosine/r after the enzyme has been incubated with 35 mg. of casein at 37° C one minute.

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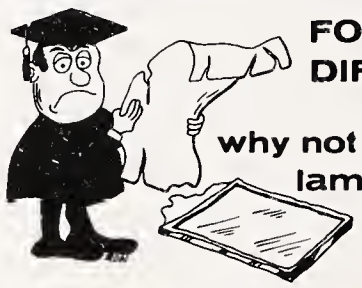


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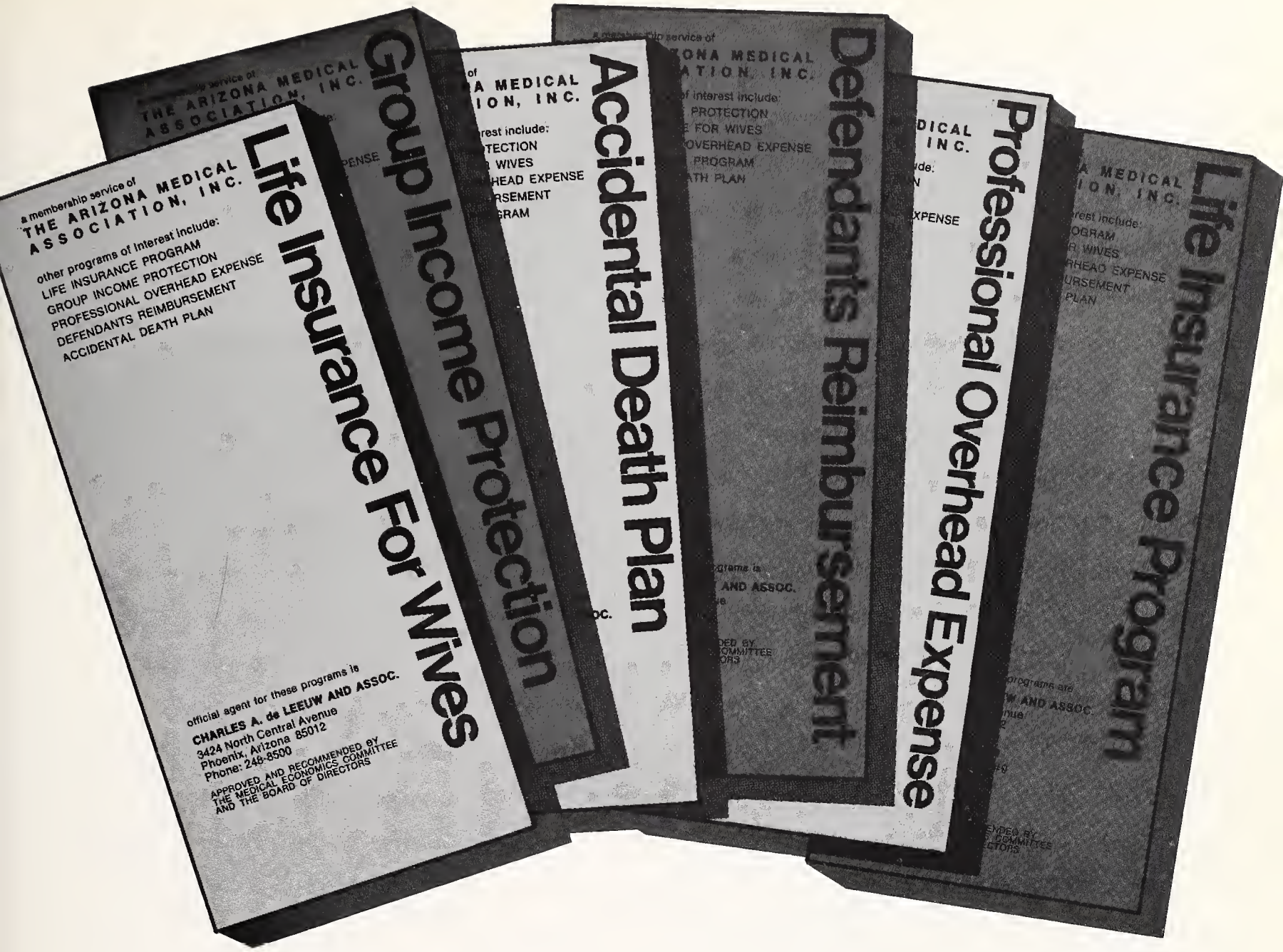
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DEPARTMENT OF
ARIZONA MEDICAL
PHOENIX, AZ 85

Membership Achievement Award

In recognition of the 1972 increase in AMA membership over the previous year achieved by the

Arizona Medical Association, Inc.

under the leadership of its President,

John Standifer, M.D.

The 1973 AMA National Leadership Conference presents this award in behalf of the entire federation of American medicine.

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February 18, 1973

ARIZONA MEDICINE

What should a medication for sleep be expected to provide?



Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits, and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychologic dependence have not been reported on recommended doses, use caution in administering to addiction-prone individu or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 m to preclude oversedation, dizziness and or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effec Employ usual precautions in patients who are severely depressed, or with

Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

Sleep with consistency

Dalmane (flurazepam HCl) has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane is in a class by itself. Not a narcotic, barbiturate or methaqualone, Dalmane is the only available benzodiazepine specifically indicated for insomnia.

Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. In most instances when adverse reactions were reported they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity agent proved effective and relatively safe for relief of insomnia.

DALMANE®
(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

t depression or suicidal tendencies.
dic blood counts and liver and kid-
unction tests are advised during
ted therapy. Observe usual precau-
in presence of impaired renal or
tic function.

rse Reactions: Dizziness, drowsi-
lightheadedness, staggering, ataxia
alling have occurred, particularly
erly or debilitated patients. Severe
ion, lethargy, disorientation and
, probably indicative of drug intoler-
or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Bio-Science Reports

The Venereal Disease Epidemic:

How To Use The Laboratory

In our newly revised "Laboratory Aid" (see below) devoted to diagnosis and treatment of syphilis and gonorrhea we quote Dr. Sidney Olansky: "Therefore, we have reached the point where the serologic problems associated with syphilis almost always can be resolved with the proper use of two tests: the VDRL slide test and the FTA-ABS test." ("Serodiagnosis of Syphilis" in The Medical Clinics of North America *56*:1145, 1972.) From our broad experience in laboratory services devoted to the diagnosis and follow-up of syphilis we know that the "almost always" part of Dr. Olansky's statement describes those situations which are most troublesome to physicians.

The VDRL test is somewhat insensitive in very early syphilis. Thus the FTA-ABS test, not ordinarily considered a screening procedure, may sometimes be the test of choice in those instances when the physician suspects early syphilis in the face of a "Non-reactive" VDRL test.

When a diagnosis of syphilis has been made, the efficacy of treatment should be checked by *periodic quantitative VDRL tests*—not by the FTA-ABS test, which may remain reactive for life even in cured syphilis.

False positive VDRL tests are usually transient and of low titer. If reactivity persists, the clinician should suspect an underlying "auto-immune" disturbance, perhaps SLE. Although not as frequent, false positive FTA-ABS tests also occur, usually because there is another disease involved; however, final resolution may not be possible until autopsy, if at all. The question of whether or not to start antibiotic therapy becomes strictly a clinical decision.

A recently described modification of the FTA test using CSF is available from our laboratory and may be of help for physicians faced with the possibility of neurosyphilis in older patients with *sero*-negative VDRL and reactive FTA-ABS tests. (Brit. J. Ven. Dis. *48*:97, 1972.)

Some Words on Gonorrhea

Unfortunately, a simple inexpensive screening test analogous to the VDRL is not yet available for gonorrhea. Transgrow Collection Kits make the services of our reference laboratory available to any physician seeking "bacteriological" confirmation of GC.

The Complement Fixation test for *N. gonorrhoeae* may be of value in uncovering "hidden" GC in the relatively asymptomatic female and in the Asian variety of gonorrhea.

In Summary

Bio-Science Laboratories offers an exceptionally complete array of tests to aid in the diagnosis of both syphilis and gonorrhea; our new booklet, "Laboratory Aids for the Diagnosis and Treatment of Gonorrhea and Syphilis," is available at no cost or obligation to guide clinicians in the selection of the appropriate tests and in the interpretation of test results.

Pertinent Tests Available at Bio-Science Laboratories

VDRL, qualitative, quantitative, and pre-marital
FTA-ABS
FTA, modified, for cerebrospinal fluid
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(for mailed specimens)
Gram stain and/or FA stain for *N. gonorrhoeae*
Complement-fixation Test for antibodies to *N. gonorrhoeae*
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(for mailed specimens)

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Van Nuys, California 91405 Dept. A
Philadelphia Branch:
116 So. Eighteenth St.
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Gentlemen: Please send me—

☐ A copy of your booklet on LABORATORY AIDS FOR THE DIAGNOSIS AND TREATMENT OF GONORRHEA AND SYPHILIS.

☐ A STARTER LAB PACK containing a small supply of postage-paid mailing containers and FEE SCHEDULE.

Name

Address

City State Zip

FREE! Laboratory Aids for the Diagnosis and Treatment of Gonorrhea and Syphilis



This 12-page booklet, written by Drs. Olitzky and Blaker of the staff of Bio-Science Laboratories, contains a clear and graphic summary of the value and limitations of laboratory technics in the assessment of these venereal disease problems. You will find it to be a quick and ready reference to update yourself in this important area of laboratory medicine. Copies are available to physicians and lab personnel without obligation. Simply fill out and mail this coupon.

MAY, 1973/Vol. 30, No. 5

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COVER

The Arizona Medical Association receives recognition for its fast increase in membership from the American Medical Association.

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Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American Pharmaceutical Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to their patients...

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical Manufacturers Association



When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist, made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree, puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25

Advertisement

ld be an obligation of medical
tice...

"Medical societies ought to con-
continuing campaigns to point
he substantial savings that could
alized thru deductible insurance
protection for catastrophic ill-
. At the very least, they should, in
atients' interest, question the
cs of any insurance organization
raises health care costs by forc-
olicyholders to buy insurance
may not need or want and prob-
won't ever use.

"Too many doctors are indiffer-
the economic consequences of
decisions. Too many, for ex-
e, habitually hospitalize patients
ne convenience of the MD. It's
ense to deny such habits exist...

"Doctors, thru their medical so-
es, have unhesitatingly appealed
eir patients for support in the
against government interference
the private practice of medicine.
he public in the past has re-
ded. It's time the American Med-
Association and state and local
cal societies paid off the debt by
sive action to hold down the cost
edical care."

of Drugs

Insurance rates and hospital
ges are only two factors in health

drugs that he selects to treat the
rity of conditions encountered in
ractice. Moreover, the physi-
s choice of a specific brand is
d on his knowledge of the pa-
s medical history and current
ition, and his experiences with
articular manufacturer's
uct.

Some substitution proponents
argued that the dispensing of a
cription is a simple two-party
action between the pharmacist
he patient, and that a substitut-
harmacist may avoid even a
nical breach of contract by simply
ving the patient that he is making
ubstitution. I would judge that
ourts would be sympathetic
d a pharmacist who substituted
ut physician approval and who
rtook a legal defense that seeks
ke the patient responsible for
harmacist's actions.

ced Prescription Prices?

Substitution advocates are
esting to the consumer, and par-
rly the consumer activist, that
ced prescription prices could
v legalization of substitution.
ave seen absolutely no evidence
tify this claim. To the contrary,
ience in Alberta, Canada, where
itution is authorized, suggests

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists *are concerned*. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

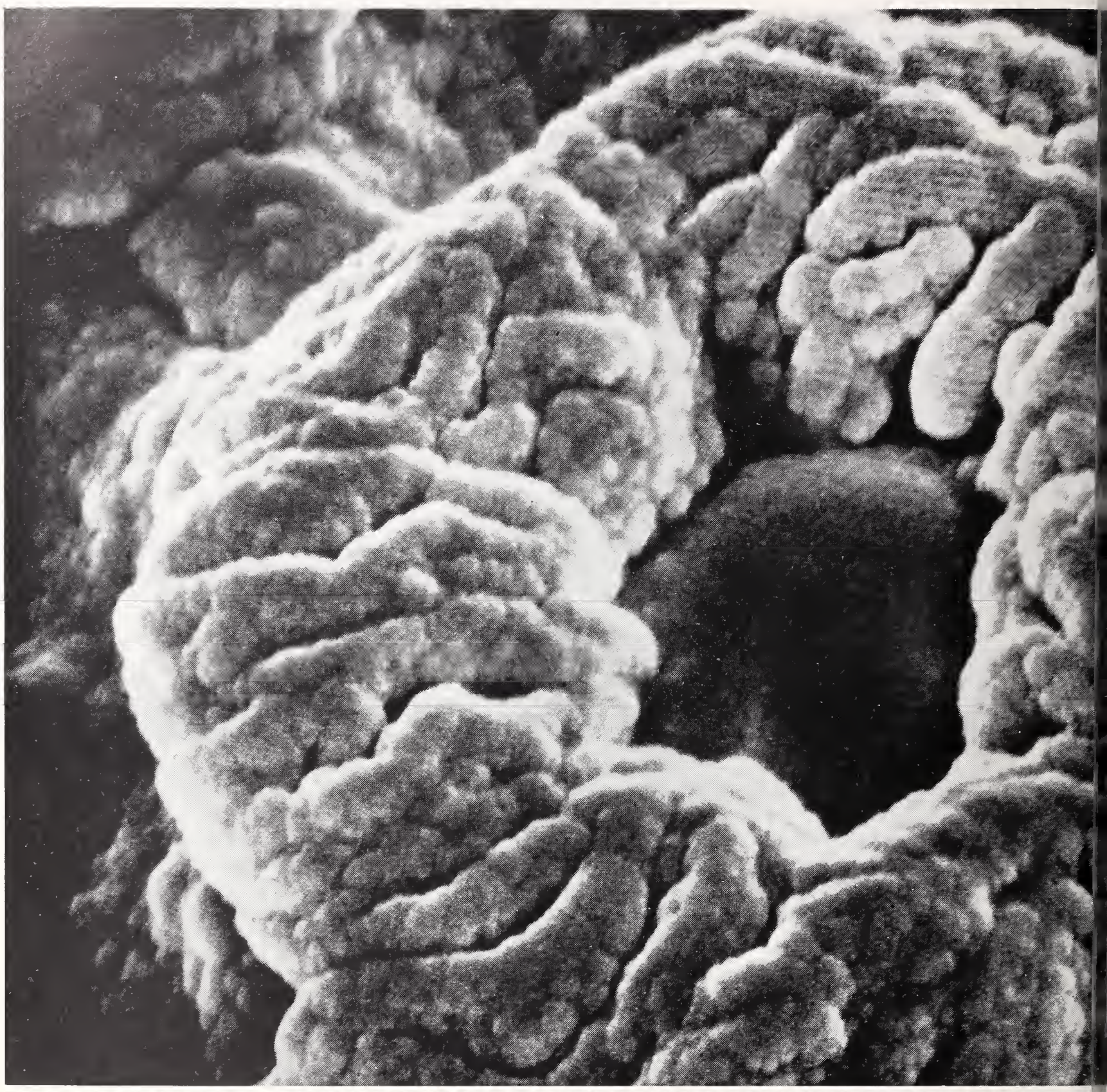
Summary

In short, what the American Pharmaceutical Association advocates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

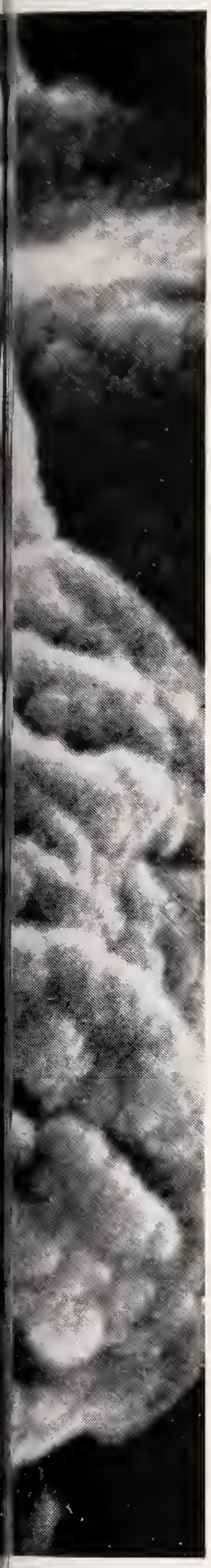
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A



This Scanning Electron Micrograph (7000 ×) is the first 3-dimensional view of a cell in an ulcerated duodenum. The center is completely denuded, surrounded by fairly well-preserved microvilli. Shirley Siew, M.D., has pioneered in this use of SEM to reveal disease processes at the cellular level that may not be perceived with other techniques.

Before prescribing, please consult complete product information, a summary of which follows:
Indications: Symptomatic relief of hypersecretion, hypermotility and anxiety and tension states associated with organic or functional gastrointestinal disorders; and as adjunctive therapy in the management of peptic ulcer, gastritis, duodenitis, irritable bowel syndrome, spastic colitis and mild ulcerative colitis.
Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.
Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been



The Tireless Man

whose duodenal ulcer needs a rest

Up early, home late, often with a scratch pad filled with notes, figures, plans. A few hours' sleep and then another long day. This is often the routine of the tireless hard-driver, one-man committee with enough overwork and stress to wear out several men. But his duodenal ulcer may warn him with sharp discomfort that he had better ease up, let some things go, and give himself—and his ulcer—a rest.

The need to reduce G.I. hypermotility and hypersecretion

Overwork together with overanxiety are often principal factors in exacerbating a duodenal ulcer. To help reduce the increased gastric secretions and hypermotility, therapy may need to include treatment for associated undue anxiety—which is where dual-action Librax can be highly useful.

The dual nature of Librax

Only Librax combines, in one capsule, the antianxiety action of Librium® (chlordiazepoxide HCl) and the antisecretory action of Quarzan® (clidinium Br). As an adjunct to a therapeutic regimen, Librax may help relieve both somatic and associated anxiety factors that often contribute to the exacerbation of duodenal ulcer symptoms.

Up to 8 capsules daily in divided doses

For optimal response, dosage should be adjusted to your patient's requirements—1 or 2 capsules, 3 or 4 times daily. *Rx*: Librax #35 for initial evaluation of patient response to therapy. *Rx*: Librax #100 for follow-up therapy—this prescription for 2 or 3 weeks' medication can help maintain patient gains while permitting less frequent visits.

For the anxiety-linked symptoms of duodenal ulcer adjunctive Librax® ROCHE

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

reported in psychiatric patients. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

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He won't resist feeling better with Mylanta®

Because the taste is good.

- □ promptly relieves hyperacidity
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- □ non-constipating



LIQUID **MYLANTA®** TABLETS

aluminum and magnesium hydroxides with simethicone

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Spasm reactor?

Donnatal®!

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

A·H·ROBINS A. H. Robins Company. Richmond Virginia 23220

2 ways to provide a daily therapeutic supply of Vitamin C: 15 baked potatoes (skins and all!) or one capsule of Allbee® with C

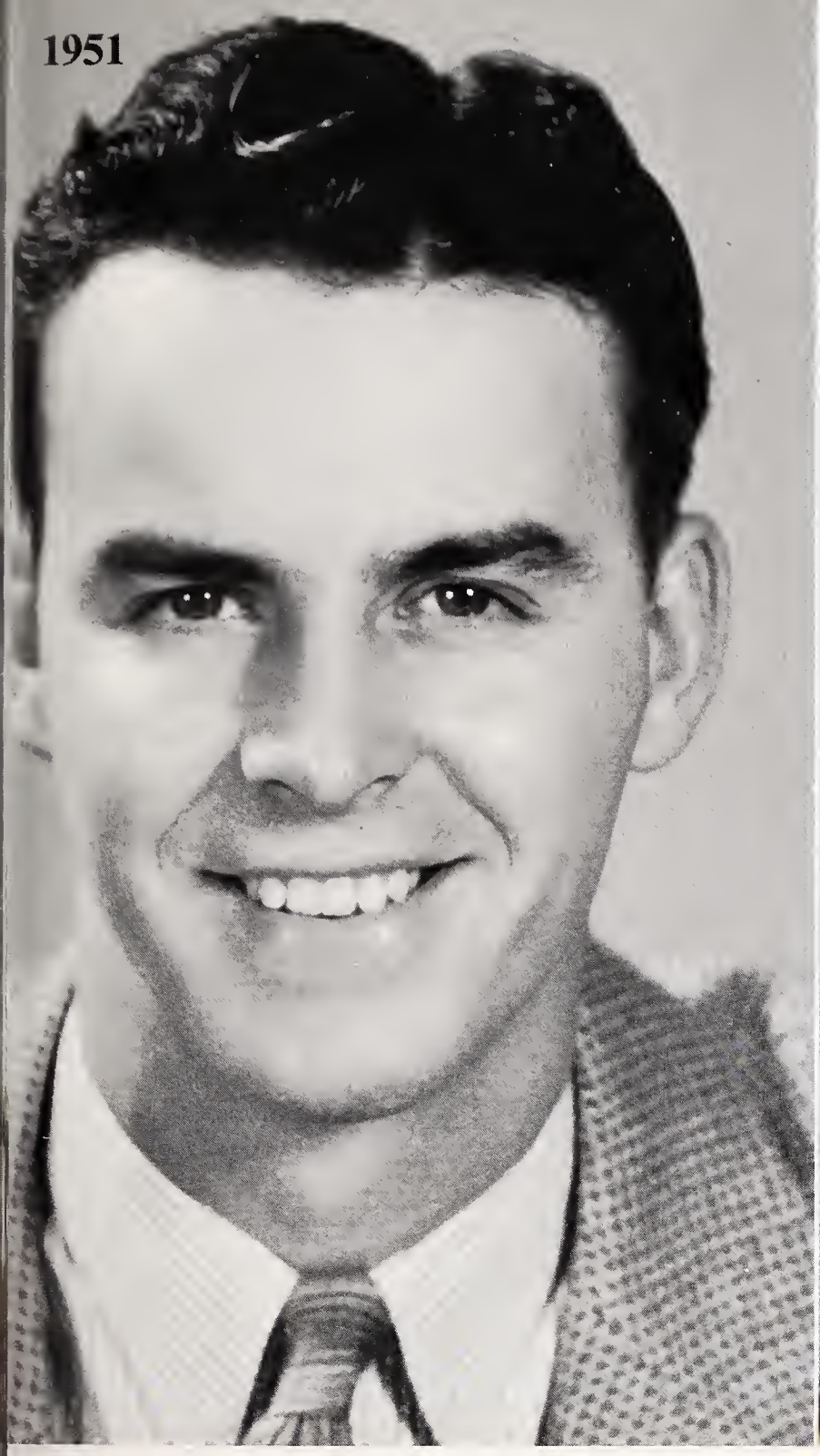
About 20 mg. Vitamin C in one baked potato (2½″ diameter).

To many people the evening meal just isn't complete without potatoes. But your patient would have to eat 15 of them (skins and all!) to get as much Vitamin C as is contained in just one Allbee with C capsule taken daily. A bottle of 30 (month's therapeutic dose) supplies as much ascorbic acid as 450 potatoes, plus full therapeutic amounts of the B-complex vitamins. For the patient who is counting calories, Allbee with C is small potatoes because the B's and C are water soluble. Consider the number of calories in 15 potatoes, not to mention the mountain of butter and sour cream. Albee with C is available at pharmacies in the handy bottle of 30 and the economy size of 100 on your prescription or recommendation.

A. H. Robins Company,
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Hair styles come and go, but Selsun® (SELENIUM SULFIDE LOTION) remains a classic for dandruff

Since 1951, Selsun has proven to be effective in treating dandruff and seborrheic dermatitis. When your patient is tormented by itching and scaling, provide the relief that only you can prescribe ...Selsun...classic anti-dandruff therapy.

Precautions and side effects: Keep out of the eyes, burning or irritation may result. Avoid application to inflamed scalp or open lesions. Occasional sensitization may occur. Rinse well.

Contains: Selenium sulfide, 2½ %, w/v in aqueous suspension; also contains: bentonite, sodium alkyl aryl sulfonate, sodium phosphate (monobasic), glyceryl monoricinoleate, citric acid, captan, and perfume.

302412R

ABBOTT



When irritable colon feels like this



. . KINESED® provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ **belladonna alkaloids—for the hyperactive bowel**
- ☐ **simethicone—for accompanying distention and pain due to gas**
- ☐ **phenobarbital—for associated anxiety and tension**

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.

STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899

(from the Greek **kinetikos**,
to move,
and the Latin **sedatus**,
to calm)

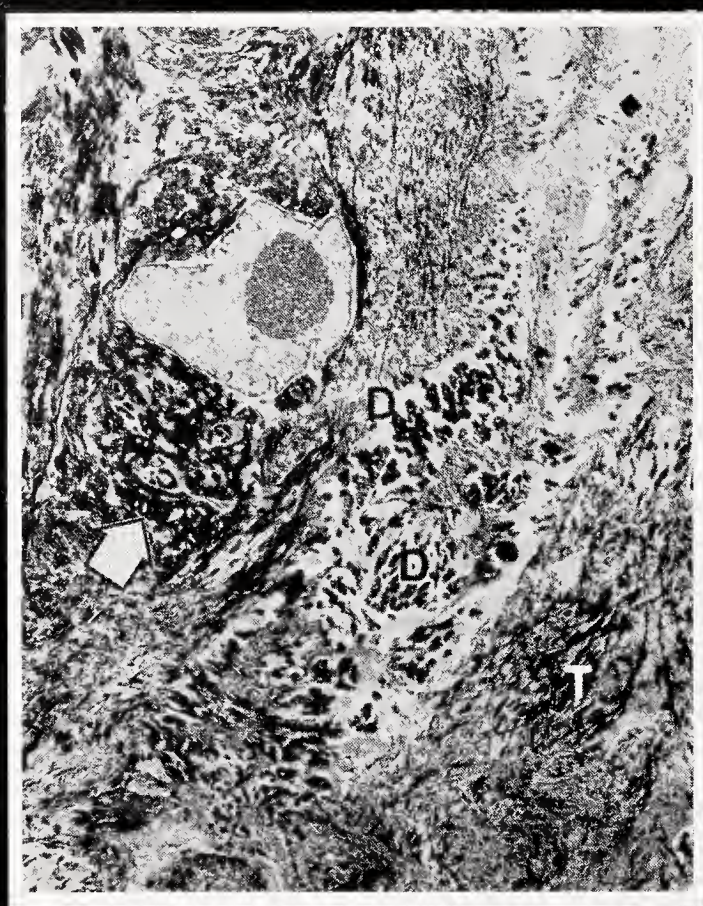
KINESED®

antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

Efudex® (fluorouracil) works where it counts...*



Lesion #2—Two days after initiation of therapy. Electron micrograph of solar keratotic skin from patient's hand.
Typical abnormalities are:
Malpighian cells [containing an abundance of thick tonofibrils (T)] which are connected with well-developed desmosomes (D). Note the clumped tonofibrils in the so-called 'dyskeratotic' cell (arrow) indicative of solar keratosis. No change can be noted at this level after two days of therapy. × 5000 (12/16/71)



Lesion #3—Two weeks after initiation of therapy. Electron micrograph of skin from patient's hand.
Improvement shown:
Less conspicuous desmosomes (D), widened intercellular spaces and Malpighian cells showing a remarkable reduction of tonofibrils (T). The arrow indicates a degenerating dyskeratotic cell. × 5000 (12/31/71)

Solar, actinic or senile keratoses

By whatever name they may be known, they commonly occur as multiple lesions and chiefly on the exposed portions of the skin. Because they may be premalignant, it is generally agreed that they should be treated. Surgery, cryotherapy, or electrodesiccation may present certain drawbacks, both for the physician and the patient, but there is Efudex® (fluorouracil)—as an alternative to conventional therapy.

Sequence of therapy—Selectivity of response

The easily applied Efudex cream or solution usually begins to show effects within a few days—an erythema in the area of the lesions. Within two weeks after initiation of therapy, this reaction usually reaches its height of unsightliness and discomfort, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Acceptable results

Treatment with Efudex (fluorouracil) provides highly acceptable cosmetic results posttherapeutically. The incidence of scarring is low.* This is particularly important with multiple facial lesions. Efudex should be applied with care near the nose, eyes and mouth.

5% cream/solution—a Roche exclusive

Only Roche formulates the 5% cream and solution —high in patient acceptability—economical—and higher in clinical efficacy than the 2% formulation for lesions of the hands and forearms.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

in treating solar keratoses which may be premalignant.



Before treatment—12/14/71



After treatment—Two weeks after therapy stopped—1/28/72

This patient's solar keratoses responded to Efudex (fluorouracil) 5%

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.
Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

An alternative to conventional therapy

Efudex®
(fluorouracil) cream/solution

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2. Be guided by the general rules of medcal writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

3. Although the Editors try to catch inaccuracies, the ultimate responsibility is the author's.

4. Articles are accepted for publication only if they are contributed exclusively to this Journal. Ordinarily, contributors will be notified within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.

5. The Journal reserves the right to edit all material.

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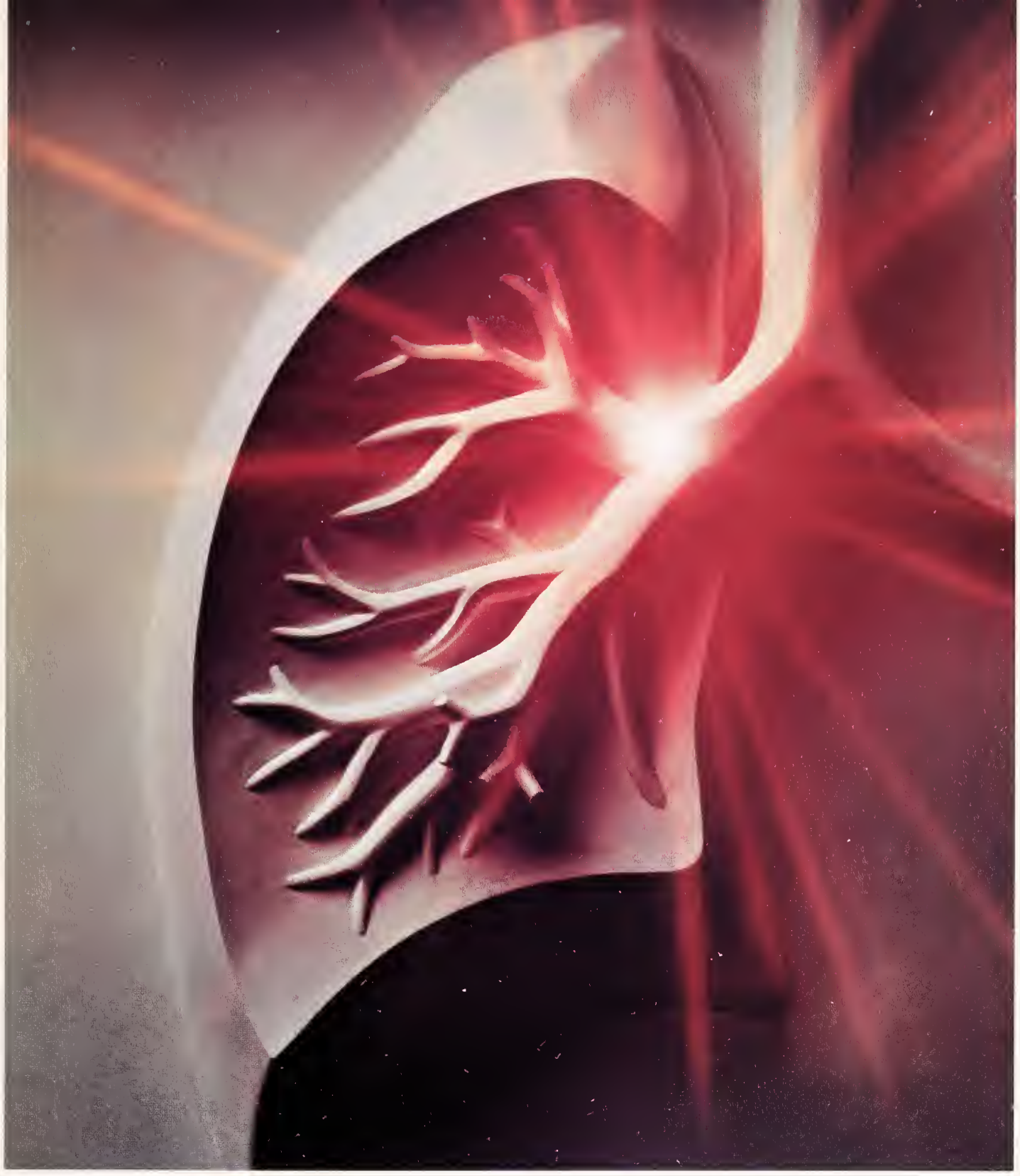
Rondomycin®
(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.
WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**
Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.
Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)
All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.
Tetracyclines are present in milk of lactating women taking tetracyclines.
To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug.The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.
Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.
PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.
Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.
ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.
Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).
Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.
Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.
USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.
For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.
Eaton Agent pneumonia: 900 mg daily for six days.
Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.
Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.
Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.
In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.
In streptococcal infections, a therapeutic dose should be given for at least 10 days.
SUPPLIED: 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules; syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71

WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



When the focus is on bronchitis due to susceptible strains of *H. influenzae* and pneumococci*

Rondomycin® 300 mg. Capsules

[methacycline HCl]

Delivers from the very first dose:

tudies show that after the first dose serum levels rapidly rise above minimum *in vitro* inhibitory concentrations

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

THE PRICE OF LETTER® (SODIUM LEVOTHYROXINE, Armour) Tablets

Armour brand of T_4

HAS BEEN CUT BY 30%.



Wouldn't it be a good idea to start your new hypothyroid patients on Letter®?

- New scored tablets for easy dosage adjustment.
- color coded and potency marked tablets for quick identification.
- 6 potencies.



0.025 mg. 0.05 mg. 0.1 mg. 0.2 mg. 0.3 mg. 0.5 mg.

Indications: Hypothyroid conditions.
Contraindications: Thyrotoxicosis, acute myocardial infarction and in the presence of uncorrected adrenal insufficiency because it increases the tissue demands for adrenocortical hormones and may cause an acute adrenal crisis.
Warnings: Should be used with caution in patients with cardiovascular disease, including hypertension. Development of chest pain or other aggravation of cardiovascular disease will require a decrease in dosage.

Injection of epinephrine in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This may be enhanced in patients receiving thyroid preparations. Careful observation is required if catecholamines are administered to patients in this category. Patients with coronary artery disease should be carefully observed during surgery, since the possibility of precipitating cardiac arrhythmias may be greater in those treated with thyroid hormones.

Thyroid replacement may potentiate anticoagulant effects with agents such as warfarin or bishydroxycoumarin and reduction of one-third in anticoagulant dosage should be undertaken upon initiation of LETTER® (sodium levothyroxine, Armour) tablets therapy. Subsequent anticoagulant dosage adjustment should be made on the basis of frequent prothrombin determinations.

In patients whose hypothyroidism is secondary to hypopituitarism, adrenal insufficiency will probably also be present. When adrenal insufficiency and hypothyroidism coexist, the adrenal insufficiency should be corrected by corticosteroids before administering thyroid hormone.
Precautions: Patients with hypothyroidism, and especially myxedema, are particularly sensitive to thyroid preparations so that treatment should begin with small doses and increments should be gradual.

In patients with diabetes mellitus, addition of thyroid hormone therapy may cause an increase in the required dosage of insulin or oral hypoglycemic agents. Conversely, decreasing the dose of thyroid hormone may possibly cause hypoglycemic reactions if the dosage of insulin or oral hypoglycemic agents is not adjusted.
Adverse Reactions: Excessive dosage of thyroid medication may result in symptoms of hyperthyroidism. Since, however, the effects do not appear at once, the symptoms may not appear for one to three weeks after the dosage regimen is begun. The most common signs and symptoms of overdosage are weight loss, palpitation, nervousness, diarrhea or abdominal cramps, sweating, tachycardia, cardiac arrhythmias, angina pectoris, tremors, headache, insomnia, intolerance to heat and fever. If symptoms of overdosage appear, discontinue medication for several days and reinstitute treatment at a lower dosage level.
Dosage: Generally, the initial adult dosage is 0.1 mg. daily. This may be increased in small increments every 1 to 3 weeks until proper metabolic balance is achieved.
Available: Bottles of 100 tablets, in 6 potencies: 0.025 mg. (violet), 0.05 mg. (peach), 0.1 mg. (pink), 0.2 mg. (green), 0.3 mg. (yellow), and 0.5 mg. (white).

Armour Pharmaceutical Company
Phoenix, Arizona 85077



With vulvovaginal candidiasis she can't wait for relief...



with Sporostacin Cream, in many cases, she doesn't have to.

A 14-day therapy* that provides prompt relief

Composition: SPOROSTACIN Cream contains chlordantoin 1% and benzalkonium chloride 0.05%, compounded with glyceryl monostearate, phosphoric acid, cetyl alcohol 2%, stearic acid, peanut oil, ionol, atanac, glycerin, benzoic acid and water.

***Indication**

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis.

Final classification of the less-than-effective indication requires further investigation.

Sporostacin† Cream

(chlordantoin 1% and benzalkonium chloride 0.05%)

Contraindications: None known.
Precautions: Cases of sensitization and irritation have been reported. When noted the drug should be discontinued.
Dosage: One applicatorful intravaginally twice daily for 14 days. Course of therapy may be repeated if necessary.
Supplied: SPOROSTACIN Cream is available in 3.35 oz. (95g) tubes with the ORTHO† Measured-Dose Applicator.

Ortho Pharmaceutical Corporation, Raritan, New Jersey 08869

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Two forms of Cordran®
Flurandrenolide



Additional information available to the profession on request.

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Original Articles

THE PEDIATRIC NURSE ASSOCIATE: WHO IS SHE, WHAT DOES SHE DO

PAUL S. BERGESON, M.D.
NANCY MELVIN, R.N., M.A.
DAVID P. FOLKESTAD, M.D.

Ingenuity in the delivery of health care services is important in solving the medical manpower shortage. Hopefully, the "Pediatric Nurse Associate" is but one approach in the right direction. The entire medical profession is watching with a critical eye. This article describes in a concise and clear manner the role of the PNA.

Definition of the problem: Manpower shortage

Special reports and studies of recent origin have concerned themselves with the critical situation in regard to medical manpower.[1-4] There has been a relative decrease in the total number of physicians, family practitioners and pediatricians delivering primary health care to children in the U. S.[5] The personnel problem is one of the very important elements at work creating a true health crisis.[6]

What do pediatricians expect?

Most pediatricians desire an academic environment, intellectual stimulation and economic independence but not at the price of a treadmill practice.[5]

Delegation of tasks

There is a well documented tendency for pediatricians to engage in activities far below their level of training. A survey of 6820 regular fellows of the American Academy of Pediatrics (AAP) revealed for example, that pediatricians perform the following duties in their offices with the following frequencies (as opposed to their office help): well child exam 90%, sick child exam 88%, interval history on sick child 83%, interval history on well child 81%, present illness history 76%, giving advice on feeding and development 75%, dispensing information on child care 69%, past medical history 66%, family and social history 56%, dispensing information on immunizations 55%. In addition, the following office task performances were delegated in only the following percentages: blood pressure on older children 33%, throat culture 25%, developmental screeing 8%, venous blood drawing 23%, growth charting 37%, hearing screening 38%, blood count 45%, immunization 58%, hemoglobin 59%, vision screening 65%, UA 68%.

It should be clear from the above that delegation of tasks in pediatric practice is not entirely appropriate. Abraham Bergman has stated that these tasks must be done, "On the basis of how well they are performed, rather than on the number of academic diplomas possessed by the performer." He further writes, "In child health we have spawned a generation of mothers who cannot choose a brand of cereal, shoes or little league baseball team without consulting a board certified pediatrician." Waiting rooms are filled by children with colds and upset stomachs, awaiting official pronouncement that cures are not available for viral illnesses.[7] While thousands of children in the U. S. receive grossly inadequate medical care, physicians persist in spending precious time performing tasks that could be equally well done by trained personnel.

It has been estimated that with delegation of health supervision tasks, a minimum of 25% of pediatricians' time would be freed. If clerical, technical and laboratory tasks and some aspect of illness care were also delegated, the amount of time freed would increase to 50%.[8]

A "set of mind"

Why then are we slow in increasing the utilization of allied health personnel? Priscella Andrews states that the main barrier encountered at the Bunker Hill Health Center Pediatric Nurse Practitioner Program is a "set of mind."[9] New ideas and methods which may later be standard practice are at first strange and difficult to accept. Local and regional tradition dictate delegation of health care tasks. We are simply accustomed to our present methods of accomplishing health care. Pediatricians have nevertheless

From the Department of Pediatrics and Pediatric Nurse Associate Program, Good Samaritan Hospital, Phoenix, Arizona.
"The research upon which this publication is based was performed pursuant to Contract No. NIH 72-4354 with the U. S. Public Health Service, Department of Health, Education and Welfare."

shown widespread desire to increase the delegation of responsibilities.[2]

Establishment of the PNA role

It is not surprising that attention has been directed to European nations where the major health burden of preventative health care is shouldered by nurses and health visitors.[10] In light of the model provided by these countries, it seems only logical that pilot programs were initiated in the U. S. to train nurses in an expanded role.[11-13] Initial success and acceptance was gratifying. This led to the definition and endorsement of the PNA role by the subcommittee in pediatrie manpower of the American Academy of Pediatricians (AAP).[5]

In a joint statement of the AAP and the American Nurse Association (ANA) responsibilities of the PNA were delineated:

A. Secure a health history.

B. Perform comprehensive pediatric appraisal, including physical assessment and developmental evaluation on children from birth through adolescence.

C. Record findings of physical and developmental assessment in a systematic and accurate form.

D. Advise and counsel parents concerning problems related to child rearing, growth, and development.

E. Advise and counsel youth concerning mental and physical health.

F. Provide parents and other family members with the opportunity to increase their knowledge and skills necessary for maintenance or improvement of their health.

G. Cooperate with other professionals and agencies involved in providing services to a child or his family and when appropriate, coordinate the health care given.

H. Identify resources available within the community to help children and their families, and guide parents in their use.

I. Identify and help in the management of technologic, economic, and soeial influenees affecting child health.

J. Plan and implement routine immunizations.

K. Prescribe selected medications according to standing orders.

L. Assess and manage common illnesses and accidents of children.

M. Work collaboratively with physicians and other members of the health team in planning to meet the health needs of the pediatric patients.

N. Engage in role redefinition with other members of the health team.

O. Delegate appropriate health care tasks to nonprofessional personnel.[14]

It is proposed that the PNA is a new type of primary health care provider playing an intermediate role. In the process of change the physician remains responsible for medical direction and decisions, but stops doing things the nurse can do better. Likewise the nurse stops doing things done better by aides and technicians (who should also be part of the team). Certain decisions previously sacredly reserved to the pediatrician are shifted to the PNA. This necessitates a high degree of trust, collaboration, interdependency and communication.[15] No longer is the nurse a vehicle to carry out the wishes of the physician, once the decision has been made by him. Rather, there is a sharing of responsibility. Therein lies the great innovation in the PNA concept. The term "associate" is truly apropos for her new role.

Well baby care

Several very positive aspects of PNA functions have been documented. Perhaps the most useful is performance of well baby examinations. The excellence of such an exam as performed by a PNA is exemplified by the description of a routine exam in a private office: "For example, during a typical checkup of a young infant, the nurse will discuss feeding (the ingredients of the formula, number, volume, and interval between feedings; acceptance; regurgitation), solid foods (when and how to introduce, variety), developmental milestones, bowel and urinary patterns, play habits, sleep patterns, mother's feelings about the infant, relationship with siblings, father's role in care, recent illnesses, accident prevention, immunizations (type, need, reactions, management), minor problems such as thumb sucking, and any other items that may be pertinent. Height, weight, and head circumference are measured for all children when indicated. Vision is tested with the Snellen "E" chart or the Sloan letter chart for children over the age of 5 years with the Titmus Stereotests or the Guibor Nearpoint "E" chart for those below the age of 5 years. As part of a thorough assessment, the nurse performs a developmental evaluation using the Denver Developmental Screening Test for children under 6 years. A

complete physical examination is then carried out (including funduscopic and otoscopic examination and use of the stethoscope for appropriate regions of the body). Blood pressure determination and urinalysis are included as routine procedures. Gross testing of hearing and localization of sounds is accomplished in infants by use of high and low frequency noise makers. If further audiometric testing is necessary, the child may be referred elsewhere. Either the nurse practitioner or one of the other nurses in the office administers immunizing agents at the end of the visit."[16]

Sick child care

The PNA, however, is not limited to the well child. As set forth in the statement by the AAP and ANA, she may assess and manage common illnesses and accidents in children. A precise list of what disease processes could and should be handled by the PNA has never been defined and perhaps should not be. This must be an agreement between the physician and PNA and worked out carefully between them in a process of collaboration and monitoring until both doctor and nurse are satisfied that she is competent to differentiate between those clinical situations which she can manage and those requiring referral.[17] These are arbitrarily set by the team and will vary according to personalities, intelligence, training and competance. Little is known about how teams may differ and what model may be most effective. The PNA can handle, however, about three fourths of children presenting to an ambulatory office setting.[18]

Telephone service

Strain and Miller have described utilization of a RN trained in giving telephone adviee. She took an average of 25 calls per day and handled the call in 92% of cases either directly or by consulting the physician. There was a saving of 2 to 3 hours per day of physician time.[19] In one study, 12.5% of the pediatricians working day was spent advising parents over the telephone,[20] therefore, the potential for help in this area is great.

Personal care

The PNA usually spends more time with each patient than the physician. The total time probably averages about 30 minutes, but may be as long as 1 hour.[21] This extra measure of time brings out problems which would have been glossed over by the more hurried physician and results in more complete and personal care.[16,21,22]

Competance

The competance of the PNA has recently been studied. Graduates of the Colorado Program were compared to medical students and pediatric residents in regard to appropriateness, thoroughness of history taking, ordering appropriate lab tests, and quality of explanations to mothers. Their scores compared very favorably to both other groups and in instances were superior.[23]

Acceptance

Consumer acceptance of the expanded role has been excellent. In a community clinic in Colorado the patients handled by the PNA had a significantly lower failure rate for return appointments. It was 9% versus 25-45% in the other portions of the clinic. Field visits indicated that mothers were following advice given by the PNA. In addition, mothers felt more comfortable bringing problems with feeding, toileting, growth and development to the nurse and felt the counselling was more specific and individualized.[24]

In another study[25] very favorable response by patients was obtained regarding PNA services including home visits, newborn care, telephone service and visits to newborn and mother in the hospital. More than 90% of parents considered the association between MD and PNA desirable and an inevitable trend.

Alfred Skinner has described reluctance of some parents who felt the first year of life is so important that physician visits were mandatory, especially with the first child. They describe that in their office, a physician visit is available for the asking.[26] One author of the present paper has on the other hand experienced preference of some parents for a PNA visit. Possibly the best care is provided by the alternation of visits as advised in AMA and AAP publications.[27-28]

Freeing up of physician

Obviously by assuming tasks as outlined above, the doctor may concentrate on more challenging problems. The authors personal experience is that this aspect is extremely gratifying. In one clinical setting the physicians expressed the usefulness of the PNA in terms of the fact that they were spending one third less time in the office.[29] Indeed, the physeian mobility PNA's are able to make possible is essential to allow physicians to play desired roles in the schools, courts and other settings.

Financial aspects

The financial aspect of services performed by the PNA have come into discussion. Some physicians have charged a lesser fee for services performed by this PNA than as if the same task had been performed by themselves. This, however, would indicate that PNA services are considered to be of lesser worth.

Studies to date would indicate that a PNA's presence in an office actually improves quality of medical care. It is therefore advised that recompensation for PNA services be on the same level as physician services.[5] It has been documented that the PNA may generate added income in a private office.[16]

Office space

Office space is a problem of importance but the suggestion has been made that offices may be used by PNA's while the pediatrician is rounding and performing miscellaneous duties, at least in early stages of her employment while additional space can be obtained.[5]

Research

Much research remains to be done in this field. Silver sees the need of proceeding rapidly with training of PNA's and child health associates to prevent total crisis in the delivery of pediatric care and that the establishment of training programs cannot wait the results of evaluation studies.[30-31] Hoekelman wisely adds that we must evaluate in a systematic manner, what we are proceeding to do, as we do it. He points up the fact that research in the field to date has been done by persons committed to the concept but not by impartial investigators. Objective, problem oriented and systematic evaluation in several needed areas have been outlined.[32]

Comment

In a keynote address to the AAP, ANA conference on utilization of allied health workers, Dr. Phillip R. Lee addressed himself to the current health care crisis. He stated, "Unless we demonstrate a willingness to test alternatives that meet the requirements of access, availability, comprehensiveness, quality, and reasonable cost, solutions will certainly be imposed upon us by those with less knowledge of what is needed."[33] Although no easy solutions exist in regard to our vast medical problems in the U. S., the PNA concept is one of the finest and best tested proposals that have been put forth and seems worthy of intelligent implementation. Further evaluation and refinement should lead to wider, higher quality use in this expanded nursing role.

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A PEDIATRIC NURSE ASSOCIATE PROGRAM FOR ARIZONA

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The local effort directed toward meeting the pediatric manpower shortage is described. It would be wise for all physicians and health care organizations involved in the delivery of care to children to avail themselves of this information. The resource of the Pediatric Nurse Associate has not yet been fully appreciated.

In many areas of Arizona as well as the United States as a whole, pediatricians are overworked and overextended in their attempt to provide high quality medical care to large numbers of patients. Recognizing this problem, we have made a direct attempt to confront it by training high quality Pediatric Nurse Associates in our hosiptal. We have updated and expanded our program and have obtained federal financing to insure an ongoing effort. The purpose of this paper is to describe this service to the medical community in this part of the country in hopes that pediatricians and family physicians will consider taking advantage of its potential.

A. BACKGROUND AND NEEDS:

In November, 1969, an Ad Hoc Committee was organized in Phoenix to explore in depth the role of the Pediatric Nurse Associate. The group, comprised of nurses and pediatricians, began laying groundwork with the encouragement of the nurses in the community, as well as the Arizona Chapter of the AAP and the County Pediatric Society. Initial planning and development costs were partially defrayed by the Arizona Regional Medical Program and Good Samaritan Hospital itself supported the pilot program for approximately two years until federal funding could be obtained.

It was felt there was a clear need for the program. No such program existed in the State and recruitment from outside sources had been unsuccessful. The Arizona physician/population ratio is 146/100,000, which is lower than the national average.[1] The area served per physician in Arizona is large. Certainly any help offered to the pediatricians of Arizona is appropriate and greatly needed.

Good Samaritan Hospital's Pediatric Nurse Associate Program was begun in February 1971. After extensive study of the programs existing at that time, an attempt was made to incorporate their best aspects and to profit by their errors. No obligation was felt, however, to limit the scope of our effort to previous models. Our philosophy is to improve on previous efforts and pioneer in the teaching of graduate nurses. The thrust of our project is to refine and improve our curriculum and thereby produce a very high quality graduate.

B. COURSE:

The course title is: The Expanded Role of the Nurse in Ambulatory Child Health Care. It is a four month continuing education effort, conducted five full days per week and is offered twice a year — fall and winter. It is funded for ten students per class. Clinical experience in a variety of ambulatory settings is offered concurrent with theory and demonstration. A certificate is granted on satisfactory completion of training.

1. OBJECTIVES:

Our objectives and curriculum closely reflect on guidelines set forth by the AAP and ANA for such courses. The major objective is to provide selected registered nurses with the educational opportunity to gain additional skills and clinical expertise for more responsible and active participation in the delivery of health care for children in a variety of ambulatory pediatric health care settings. The emphasis is on well child health supervision and on working as a responsible member of the health team. More specifically, the students acquire the scientific knowledge and skills to:

a. Obtain a health and development history and record findings in a systematic, accurate and succinct form.

b. Perform a comprehensive physical examination using techniques of observation, inspection, auscultation, palpation and percussion, using the appropriate instruments and requesting necessary diagnostic tests.

c. Differentiate between normal and abnormal findings on the health history and physical assessment and take appropriate nursing action or make appropriate referrals.

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d. Differentiate between normal, variations of child development and abnormal deviations by utilizing specific developmental screening tests and make appropriate referrals.

e. Provide health counseling and anticipatory guidance to parents regarding child rearing concerns, such as feeding, developmental stages, common illnesses, safety and accidents.

f. Identify and manage specific minor common childhood conditions and illnesses such as, feeding problems, rashes, upper respiratory illnesses and diarrhea.

g. Carry out and/or modify a pre-determined immunization plan.

h. Make home visits, hospital visits and other health or community agency visits as appropriate in providing comprehensive care.

i. Recommend non-prescription medications, according to agreed protocol.

j. Prescribe or dispense selected medications, according to agreed protocol.

k. Collaborate with physicians, other members of the health team and consumers in planning to meet the health needs of infants and adolescents.

2. FACULTY:

The PNA Program faculty includes a full-time PNA with a master's degree from the original PNA Program in Colorado, as well as two quarter time pediatricians. These three people act as co-directors. Also participating are full time members of the departments of Pediatrics, Psychiatry, Psychology, Speech, Audiology, OB-Gyn, Neonatology, Learning Disabilities School and Nutrition. Local pediatricians, specialist physisians in several fields and residents are included, as well as physicians in community health facilities. The nursing faculty includes full-time specialists in specific clinical nursing areas as well as nurses in community health facilities.

3. ADMISSION CRITERIA

Admission to the program requires that the candidate:

a. Must have completed basic nursing education in an accredited school of nursing and be licensed as a registered nurse (Initially, diploma, baccalaureate or master's degree applicants will be considered).

b. Must have had previous experience in pediatrics and preferably some experience in community health.

c. Must be in good physical and emotional health.

d. Must have the desire and committment to expand professional involvement.

e. Must provide evidence that she is or will be employed in a setting that will permit her to function as a Pediatric Nurse Associate as defined in this program.

f. Must arrange with her employer for continuing "on-the-job" education after completion of the formal 16 week program.

4. CURRICULUM:

The curriculum is divided into two main segments: theory and supervised clinical experiences plus demonstration. The theory consists of didactic sessions on history and physical examination (36 hours), growth and development (28 hours), sensory development and problems (5 hours), community health concepts and agencies (4 hours), family nutrition (6 hours), clinical problems of children (20 hours), emergencies (2 hours), laboratory (1 hour), common problems of child care (60 hours) and role reorientation (8 hours).

Clinical experience consists of infant examination in the newborn nursery (12 hours), well baby clinics (64 hours), community child care clinics (52 hours), pediatric ward rounds (16 hours), specialty clinics (10 hours), sick child clinics (29 hours), laboratory (2 hours), and history case presentations (12 hours).

An integral part of the curriculum is a well documented 10-12 page research paper on some meaningful project of the PNA's choice. The paper is reported orally to the students, faculty and PNA graduates and is published for use in the program.

5. TUITION AND SUPPORT

The tuition for the course is $600.00. There are some funds available for stipends. In 1972 funding was obtained through the U. S. Public Health Service, Nursing Division of the Department of Health, Education and Welfare. With continued participation by the hospital on a cost sharing basis, we are optomistic the program will be a permanent feature of our training efforts. One attractive aspect is our ability to subsidize teaching consultants, a long overdue feature to teaching in medicine and nursing.

C. MEDICO-LEGAL CONSIDERATIONS:

This last year the Arizona State Legislature enacted SB. 1098 designed to define and enable the practice of the expanded role of nursing in the state. This includes the maintenance of health and prevention of illness but also "nursing assess-

ment, evaluation of the patient and the administration of care to the ill, injured or infirm." It also provides for "the administration of medications and treatment as prescribed or authorized by a person licensed in this state to prescribe such medications or treatments." There are also provisions for care given in emergencies.[3]

D. RELATIONSHIP TO HOUSE STAFF:

As in other settings[4] we have observed a synergistic relationship between PNA students and house staff. We have purposefully designed training situations with both groups working simultaneously in clinic. We believe that interaction during training is a highly desirable exposure encouraging easier adjustment in fulfilling their respective roles and incorporating this method of delivering health care in practice. Residents conduct weekly ward rounds and have lectured on chosen subjects. Our physicians have remarked on the competence and extent of training of the PNA, but their limitations have also been made clear. A weekly ambulatory pediatric conference is attended by the staff and students of the PNA program and pediatric department.

E. GRADUATE POSITIONS:

To this date, fourteen registered nurses have completed the program with ten working in Arizona, three in California and one in Wisconsin. The Arizona graduates are working in the following positions: Two are with the County Health Department in Phoenix and surrounding areas; two are with the County Health Department in Tucson and surrounding areas; two are Indian nurses employed by the United States Public Health Service, one working on the Hopi Reservation and the other working on the White Mountain Apache Reservation; two are working in private pediatricians' offices; one is working for a family group program; and one is working at Good Samaritan Hospital. The California graduates are working in the following positions; one in a family group program; and two in private pediatrician's offices. The graduate from Wisconsin is working in a multi-specialty private clinic with nine pediatricians. There are six students enrolled in the present program, making a total of twenty graduates by December 1972.

F. FOLLOW-UP:

A record is kept of each graduate via contact through mailed questionnaires. The type of work done, problems encountered, satisfaction and other parameters are tested in order to give positive feedback into the teaching we do and to measure the pulse of the developing role of the PNA. This valuable research input will help in the further definition and implementation of the PNA concept. Certainly many questions remain to be answered.

An annual seminar is planned at our hospital for graduates and interested parties to keep the associates abreast of recent developments in pediatrics in PNA practice. It is thought that each PNA must be active in continuing education just as physicians must be.

G. COMMUNITY SUPPORT:

Early studies which looked at the demand for service documented a widespread belief among pediatricians that PNA's are needed, showed large numbers of potential employers for PNA's and indicated that pediatricians generally held, that the biggest deterrant to the placement of PNA's in their offices was the lack of trained personnel.[5] In spite of these predictions, the greatest problem at the time we write this communication has been the inability of highly qualified candidates of the program to find prospective employers in Arizona. We are intrigued with the possibility of the use of PNA's in outlying areas in family practitioners offices as well as in pediatric settings. The program does not function as an employment agency; nevertheless, our office can give information on applicants who meet the criteria for admission.

SUMMARY:

We are making a contribution to the solution of the problem of the well-recognized health manpower shortage which has long been the focus of much public and professional concern. The assumption that registered nurses with special training may increase quality and quantity of pediatric services has been tested and found valid. We are hopeful that physicians will recognize the potential of the newly defined role of the PNA and benefit from the efforts of this fine local training program.

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DISSECTING AORTIC ANEURYSM – A CASE REPORT

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The appearance of chest pain in a subject with a documented dissecting thoracic aortic aneurysm dictates invasive study. We present here the angiographic findings from such a case and review the pertinent literature on the subject.

CASE REPORT

W. H. (GSH #175-529) a 54 year old man, was admitted to the Good Samaritan Hospital in February, 1972, with the chief complaint of chest pain. The pain was non-puleritic, sharp in quality, substernal in location and radiated to the back. The patient underwent aortoiliac arterial graft surgery in 1966 for intermittent leg claudication secondary to atherosclerosis. In 1969, a dilated thoracic aorta was noted on a routine P-A chest roentgenogram. At that time he had no chest pain. On admission to the Good Samaritan Hospital, his blood pressure was 190/130 mm. Hg. in both arms, pulse 90/minute and regular and temperature 99F. The pertinent physical findings were confined to the cardiovascular system. Fundoscopic examination re-

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vealed moderate arteriovenous nicking and on percussion of the posterior chest there was a small area of dullness 2 cm. to the left of the thoracic spine. Auscultation of the heart revealed a third heart sound and a Grade II/VI systolic ejection murmur at the tricuspid area. A Grade II/VI systolic bruit was heard over the right carotid artery. All peripheral arterial pulses were 3 plus and equal. A complete blood count, serum sodium, potassium and chloride were normal. The blood urea nitrogen was 30 mg./100 ml. and serum creatinine 3 mg./100 ml. The creatinine clearance was 28 ml./minute. Urinalysis revealed 1 plus proteinuria. Serial electrocardiograms and serum glutamic oxaloacetic transaminase, creatine phosphokinase and lactic dehydrogenase were normal over a three day period. A P-A chest X-ray demonstrated a left parahilar mass (Figure 1) which was demonstrated to be posterior on a lateral roentgenogram. (Figure 2) The patient was treated with oral hydralazine and his blood pressure returned to normal levels within 24 hours. Five days later the patient was subjected to aortography including selective renal and coronary arteriography. Selective coronary cineangiograms demonstrated a moderate degree of triple vessel coronary artery disease. Aortography revealed a large dissecting thoracic aneurysm and no evidence of major obstructive renal arterial disease. Proximal and distal limits of the aortic dissection and the "false" and "true" lumens were clearly delineated. (Figure 3) The patient underwent successful resection of the aneurysm on 3/6/72.



Figure 1
P-A chest roentgenogram demonstrates a large mass extending from the left pulmonary hilus into the left hemithorax.

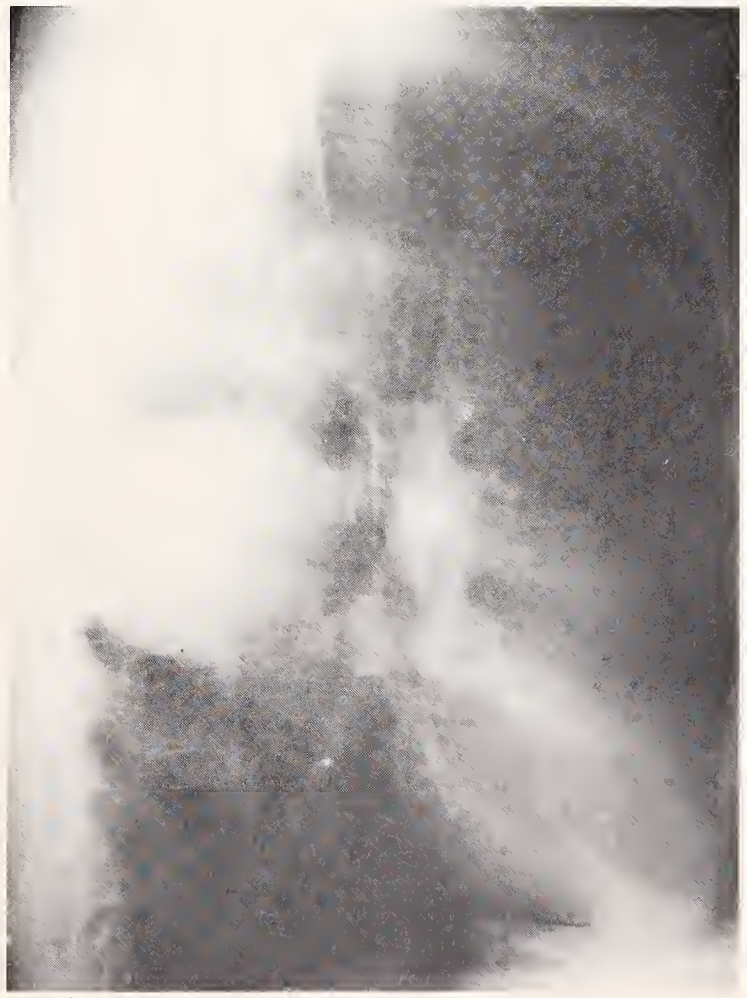


Figure 2
Left lateral chest roentgenogram shows a posteriorly located circular structure overlying the thoracic spine.

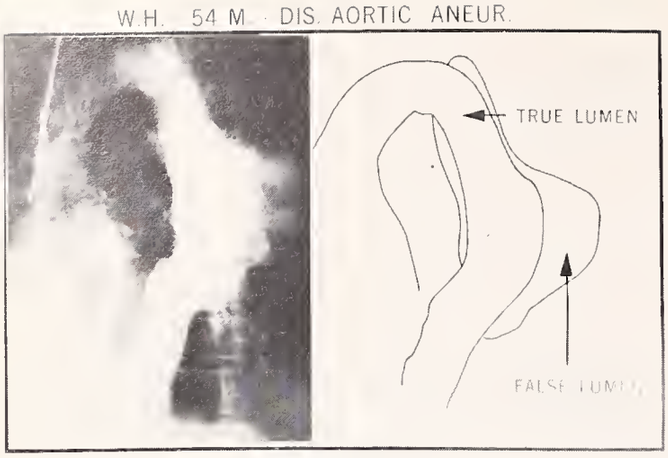


Figure 3
Aortic root angiogram (left panel) demonstrates an aortic aneurysm with dissection originating in the transverse aorta and re-entry into the descending aorta. The "true" and "false" lumens of the aorta and dissection are indicated in the right panel, which is a line drawing of the angiographic findings.

DISCUSSION

On occasion, a dissecting aneurysm of the thoracic aorta is diagnosed on a routine examination in an asymptomatic patient. Once symptoms develop, pain is the most common complaint. The pain can be ascribed to expansion of the aneurysm, or compression of the vertebral bodies and ribs by the aorta. Dyspnea, the semond most common symptom, is usually due to pressure of the aneurysm on surrounding lung tissue or the trachea. Hoarseness and dysphagia are also common initial symptoms and may indicate recurrent laryngeal nerve or esophageal compression.[1]

On physical examination diastolic hypertension (greater than 90-95 mm. of Hg.) will be found in 50 to 70% of cases. Additional findings include mediastinal widening, a fixed vocal cord, obstruction of the superior vena cava, tracheal deviation, a pulsating anterior chest mass or dullness to percussion of the chest wall posteriorly.

The chest roentgenogram provides a very accurate means for diagnosis. In 51 patients[2] with fatal aortic aneurysm, 44 (86%) of the lesions could be detected on routine chest X-rays. However, as has been shown by DeBakey[3] and Ching[4] the evaluation of a patient with a thoracic aortic aneurysm should include aortography and arteriography of the coronary arteries, renal arteries, the ileo-femoral arterial system and possibly the cerebral arterial supply. This complete angiographic study is performed in order to assess the extent of involvement of these vessels by the aneurysm.

Acute dissecting aneurysms of the aorta occur most commonly in the ascending aorta and are accompanied by severe pain. Painless dissection of the aorta is also known to occur. If such a patient survives the initial episode of dissection, he may, therefore, present at a later date with an expanding, symptomatic aortic aneurysm. It has been shown by McFarland et al,[5] that when the false channels of acute aortic dissections cannot be opacified during angiography and patients are treated medically, there is a low incidence of saccular aneurysm on follow-up examination.

The medical and surgical treatments of acute dissecting aneurysms have been well described in the past few years, are controversial, and will not be discussed in detail at this time. It should be noted, however, that extension of the dissection, hypotension, hemopericardium, aortic insufficiency, hemothorax, decreasing urinary output, altering neurologic status and unremitting chest pain are ominous prognostic signs and under these latter circumstances surgical correction is indicated. On the other hand, a stable, chronic dissection of the aorta can be managed by the administration of propranolol, alpha-methyldopa, reserpine and guanethidine,[5] in an attempt to diminish lateral shearing stress on the already damaged aorta.

It is imperative that a thorough evaluation of the cardiovascular system be carried out in patients with dissecting aortic aneurysm. Doeumentation of the coexistence of aortic aneurysm and other arterial disease is extremely important since a high percentage of patients will die from myocardial infarction, renal failure, ruptured abdominal aneurysm, or cerebrovascular accidents before, during or after corrective surgery. Ching[4] has demonstrated that resection of a thoracic aneurysm, even though successfully performed, may not significantly increase survival in subjects with diffuse obstructive atherosclerosis of other major vessels.

ACKNOWLEDGMENTS

We wish to acknowledge the technical assistance of Nancy Copeland, R.N., Carole Crevier, Larry Kuriger, Sydney Peebles, Sharon Squire and Les Zendle.

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EMERGENCY MEDICINE

Particularly during the past decade hospital emergency departments have been caring for medical and pediatric patients as well as the acutely injured. The majority of patients who are taken care of in emergency rooms are done so on an elective rather than on an emergeney basis, presumably because of the increased mobility of the population and deereased personal patient-physician relationships. It is not difficult to see why a new type of physician has appeared in many emergency departments on a full-time basis. In addition, the recent drive toward categorization of hospital emergency departments will probably increase the need for emergency physicians. The Commission on Emergency Medical Services of the AMA has set up four categories of hospital emergency departments: (1) Comprehensive, (2) Major, (3) General, and (4) Basic, in order of complexity of facilities and personnel to be provided.

Previously the Committee on Trauma of the American College of Surgeons, the American Association for the Surgery of Trauma, the American Academy of Orthopedic Surgeons, and the AMA's Commission on Emergency Medical Services were the sole leaders in this field. Now, the American College of Emergency Physicians (founded in 1968), the University Association for Emergency Medical Services (founded in 1969), and the American Society for Critieal Care Medicine (founded in 1970) are also deeply involved in emergency medicine. Fortunately, these efforts, by all concerned, are being recognized more and more by private and governmental funding sources. Our patients need the very best that all of us ean provide. Arizona as a state is off to an excellent start in this area of medicine. The newly created Division of Emergeney Services of Arizona and its Commissioner, Doctor James L. Schamadan, should have the active support of all Arizonans.

John R. Green, M. D.

Editor's Page

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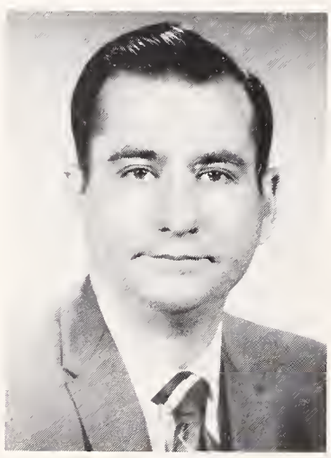
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President's Page

SEARCH COMMITTEE



PHILIP E. DEW, M.D.
PRESIDENT

When Dr. Merlin K. DuVal went to Washington to accept his high position in HEW in the summer of 1971, Dr. Jack Layton was appointed interim dean. Subsequently it was announced that Dr. DuVal would return as Vice-President in charge of all Health related activities. Dr. Layton did not wish to continue in the post and so it became necessary for a new dean to be selected. In May of 1972, John P. Schaefer, President of the University of Arizona, appointed a Search Committee to find a dean for the College of Medicine. I was invited to participate as President-Elect of the Arizona Medical Association. In addition, the Committee was comprised of the following: Charles D. Christian, M.D., Head, Department of Obstetrics and Gynecology; Mrs. Mary Jane Hicks, third year medical student; Paul C. Johnson, Ph.D., Head, Department of Physiology; Jack Layton, M.D., Acting Dean, College of Medicine and A. B. Weaver, Ph.D., Vice-President, University of Arizona, Chairman of the Committee. The Committee was charged with recommending the strongest possible slate of candidates to President Schaefer.

The Committee met on the average of every two weeks from then until the present time. We made every attempt to involve all interested parties in the submission of possible candidates. An invitation was printed in Medical Memos for each of the physicians in Arizona to suggest likely candidates if they so desired. Using a wide variety of sources of information, the Committee attempted to narrow down the selection to just a few of the best candidates. When we had reduced the number from about 60 down to 5, these 5 candidates were invited to the campus. It became obvious that when they visited the campus, there would be a great number of interested parties with whom each would have to spend some time. Since each of these is a busy person, the scheduling was quite difficult. It was appreciated that meetings with them might be on short notice.

In order to have members of the medical community in private practice meet these candidates, I chose physicians at each level of organized medicine to represent us. Luncheon Meetings were arranged. Each physician had an alternate

who came if he could not. There was broad representation from the specialties. We subsequently met and discussed the candidates. I then transmitted the practicing physicians' evaluations and ranking of the candidates to the Deanship Committee. I am grateful to these physicians for their assistance. I can assure you that their input has been taken seriously by the Deanship Committee. I would like to thank them all publicly.

For the most of the first six months of our deliberations we were not certain whether or not Dr. DuVal would be coming back. However, we attempted to choose a candidate who had obvious strength in three main areas:

1) Research
2) Delivery of Health Care
3) Teaching

We were looking for someone with success in these areas who had demonstrated administrative excellence. The final selection has not been made as yet. I can assure you that he or she will be the strongest we can find. Dr. DuVal intends to be Vice-President, not Dean.

The University of Arizona College of Medicine stands very high nationally among all medical schools, new and old. This is in striking contrast to some of the other newer medical schools, who have in instances, been racked by turmoil or plagued by inferiority. There are some obvious reasons for the success of this school. The most obvious is Monty DuVal. He did what perhaps no other single individual in this country could have done as well at that time. He united the physicians and other important elements in the state behind the school, and he built it from scratch. Another equally important element has been our legislature, which has been quite generous with this medical school. I think they should be commended publicly for this and they should indeed be proud of what has been achieved. But finally, the combination of involvement of physicians and their cooperative attitudes have prevented the kind of turmoil so common in this country in the past, between the medical school and the community physisians. Involvement of the Medical Association in the selection of the new dean is another illustration of the cooperation between elements in the state which have produeed such great success in the past. ArMA physicians have responded with significant input which I know will help lead to selection of a high-quality candidate.

Dean's Page

A CLINICAL RESEARCH UNIT

A Clinical Research Unit (CRU) supported by the National Institutes of Health was recently established by the Department of Surgery at University Hospital. The Research Center in Surgery is not a place but a budget. The center is unusual in other respects, as NIH rarely places such a center under a Department of Surgery; also, research effort will be directed primarily at common, rather than rare, diseases.

To qualify for Clinical Research Unit funds, the selected hospital must be actively engaged in major research related to patient care. Thus, Dr. Marlys Witte, Director of the Clinical Research Unit program, emphasizes that the study of each disease is expected to benefit the afflicted patient as well as to provide basic knowledge of the disease process.

Any faculty member may submit a protocol for consideration by the Clinical Research Unit Advisory Committee and the University of Arizona Human Rights Committee. The Advisory Committee is a multi-disciplinary panel of physicians and other scientists who review the proposals for scientific soundness and likelihood of successful completion. Theologians, lawyers, psychologists, and psychiatrists constitute the Human Rights Committee designed to ensure that patients understand the conditions involved in the research project.

The actual costs of research studies are borne by the Clinical Research Unit budget. The protocols for these special patients usually involve

more detailed examination of specimens of blood urine, and other body fluid and tissues and are without additional risk to the patients. Occasionally, the protocol may include the use of new drugs and new operations in patients not responding to usual modes of therapy.

Dr. Erle E. Peacock, Jr., Principal Investigator of the Grant, and Dr. John W. Madden are major researchers in the study of wound healing and scar formation. Formation of a scar plays a major role in distortion of heart valves following rheumatic heart disease, in constriction of the esophagus after injury or ingestion of caustic chemicals, intestinal adhesions after abdominal operations, and strictures of the urethra.

Drs. Marlys and Charles Witte are studying lymph fluid to determine why some diseases cause abnormal tissue swelling and accumulation of fluid in body cavities, and how best to rid the body of this extra fluid. They are also particularly interested in problems of alcoholism and in new approaches, both non-operative and operative, to the complications of alcoholic cirrhosis.

Trauma is the major cause of death to persons under 40 years of age. Many individuals who sustain such injury later die of fat embolism — a condition thought to be caused by release of fat droplets from marrow of fractured long bones and ribs. If fat droplets reach the small blood vessels of the lung, they block the flow of air, and death may rapidly ensue. Dr. Leonard Peltier and his staff are seeking improved methods of detecting fat release and examining pulmonary dysfunction before the pathologie process is irreversible. They are also evaluating care received at the site of accident and during transport to the hospital so as to identify the predisposing factors and reduce the incidence of fat embolism.

Dr. George W. Drach is studying calcium and phosphorus and how the balance of these minerals is controlled in patients with and without kidney stones. This information should be helpful in the treatment of stones and possibly in preventing their occurrence. Dr. Drach also is seeking a better explanation for why some patients are susceptible to repeated urinary tract infections and how best to control and prevent them.

Dr. Robert W. Anderson, a thoracic surgeon, invented a "non-sucking" heart pump which is now being used in open heart surgery. The pump has the specific advantage of allowing cardiac bypass with continued perfusion of the lungs. Dr. Anderson also is studying methods of measuring blood pressure that will reflect blood volume more reliably. This knowledge will be used to guide the evaluation and treatment of "shock."

Information obtained from these studies will be forwarded to the National Institutes of Health where it will be reviewed, analyzed, and compared to results obtained in other NIH Clinical Research Centers as part of a continuing search for advances in health care.

Topics Of Current Medical Interest

REGIONAL MEDICAL PROGRAM

RICHARD O. FLYNN, M.D.

Early this year the President, in his health message to Congress deleted the Regional Medical Program, along with some other Federal health-related programs. Many felt RMP was a bare adolescent cut down before he could fulfill his role in society. Others felt the sooner we get rid of all federal medical programs, the better off we are going to be. The vast majority of people, including physicians, wondered what RMP was, if they gave it any thought at all.

The Regional Medical Program was one of many health programs enacted by the 89th Congress and signed into law in October 1965. It was considered an outgrowth of the DeBakey Report which recommended medical eomplexes be built across the country where patients would be sent for treatment of heart disease, cancer and stroke. This was changed, primarily by the American Medical Assoeiation to an educational program designed to bring new knowledge and techniques from the laboratory and research centers to the physicians, and thus to the patient, more rapidly. In October of 1967, Doctor Melick was appointed coordinator of Arizona's Regional Medical Program. A planning grant was obtained in 1968 and the first operational grant was not given until the latter part of 1969. Arizona's early programs, like most of the other Regional Medical Programs across the eountry, were geared to assist the physician and allied health personnel, primarily nurses, in new techniques for treating heart, cancer and stroke. Control of the program was originally left pretty mueh to the regions. A Regional Advisory Group was mandatory under the law and had control of the direction that the program would take in each individual region. Early there were the inevitable problems of getting started and Dr. Melick likes to state that he spent the first two years traveling the state explaining to physicians what the Regional Medical Program was and more important, what it wasn't, i.e., a federally dominated program to be stuffed down our throats.

By the time thc first operational grants were startcd in 1970 this program was well accepted

by physicians. At about this time the Administration nationally felt that Regional Medical Programs might be a good vehicle for implementing the HMO concept, that kidney disease should probably be added which would include direct patient treatment, something that had been forbidden in the original law. Financially, the program has never been very large. In 1966 some $2 million dollars was spent, in the last full year, 1972, $114 million was spent throughout the country on Regional Medical Programs. This comes out to about 1/10th of one percent of the national expenditures on health over this period of time.

Arizona's funding got up a little over a million dollars the last full year. The programs of Arizona's Regional Medical Program followed national priorities fairly closely. The first programs funded starting in about 1970 included a chronic pulmonary disease program designed to train physicians and allied health personnel in caring for patients with pulmonary problems in the community hospitals. The Dial-a-tape program that is now being continued by the Maricopa Co. Medical Society and the Univ. of Arizona Medical School, a program on cardio-pulmonary resuscitation to assure every physician in the state had a training course in CPR, and a program for continued education of nurses. These four programs are now over with and have been taken over by other agencies and are continuing. The programs that have been funded by Arizona RMP were all designed as pilot programs that will be continued with other funds at the expiration of the RMP funds. The checklist of 20th Century books and a library network was started with RMP funds. These are being continued through the Univ. of Arizona Library and the Maricopa Co. Medical Society Library, along with other hospitals throughout the state. This allows physicians throughout the state to get articles on about any subject he would like, usually within 24 hours after the request.

It has became obvious in trying to determine what the health needs in Arizona were that there was no data base to make these determinations and a lot of RMP funds were diverted into attempting to develop a reliable data base to make these sorts of decisions. Survey techniques were developed that hopefully will be continued in the state center for health information. A bill is now before the legislature to try to fund and take over this part of the RMP program.

In the early 1970's many grant applications were received by the Regional Medical Program and the Advisory Group regarding education of physicians and all sorts of allied health manpower. Rather than approve and support these individual efforts, the Cesa concept was developed. CESA meaning Community Education Service Areas. This is a program designed to cover Arizona with 15 of these service areas. They would be designed so they would be no more than one hour driving time for any person in the state. They would probably be housed in Community hosiptals, they would have a local education committee that would determine the needs of their area and the programs necessary to meet these needs.

The facilities for these programs would be kept at the base area. It was envisioned that a part or full time medical director would be appointed in each CESA area and the continuing education that has become a necessity throughout the entire health field could be done in this manner. There are presently six CESA areas set up and functioning in Arizona.

The present mission of Arizona Regional Medical Program is defined as a program to increase the availability of care, to enhance the quality of care and to moderate the cost of care, making delivery of care more efficient. With these goals, programs were started in emergency medical service and a planning program is now going on in Pima County in close cooperation with the State Department of Emergency Medical Services.

Renal disease in Arizona received a grant for aid in dialysis and transplant. Also funds were made available for cadaver organ procurement. The concept of a limited care center was developed, an area between the home and the hospital where dialysis could be done at much less cost than it could be done in the hosiptal itself. This program, too, is working closely with State funds made available by the Legislature last year in chronic renal disease. It also had the added benefits of getting together physicians in Phoenix and Tucson in a cooperative effort against chronic renal disease. This may not be the first time in the history of the state that Phoenix and Tucson have gotten together, but it is surely the first time I know of.

A tumor registry and pace-maker registry were

developed and supported. A program for the irradication of strep infections, particularly on the reservations with thoughts of including the state were developed, a method for getting nuclear medical services to the outlying community hospitals is being developed and a program to assure an electromechanical safe environment in Arizona hosiptals has been started. At this time in RMP's history, the latter part of 1972, RMP's future seemed quite bright, particularly with some changes in thinking at the federal level so that funds were made available in a block grant rather than for specific programs and the priorities could be determined in Arizona for Arizona's needs.

The President, in his health message to Congress, stated that RMP should be phased out because the use of federal funds to finance continued education for the rich doctor was not appropriate, that it had been originally established to upgrade the health care of patients with heart, cancer and stroke, but it didn't seem to be doing this too much at the present time and that other programs were started to accomplish these same ends. Following receipt of this information, Arizona RMP did start a phase out program that will hopefully salvage at least some of the programs in Arizona. Given highest priority in this phase-out was the continuation of the CESA program. Hopefully this can be taken over by the Medical School, with I hope, the aid of the Arizona Medical Association.

The kidney program will be funded as long as possible to give the state a chance to appropriate more funds to continue this program. Health information hopefully can be transferred to the state center for health information if one is developed, or stored in the Medical School or the present Health Department. There are some quarter of a million dollars in tapes on surveys already done that will be lost unless something like this can be done.

Emergency Medical Service for Pima County will, again, tie in with the Emergency Medical Services for the state but they had counted on these federal funds for some time to develop their own funds to take over this program. What lessons, if any, are to be learned in watching the birth, growth to early adolescence and death of the Regional Medical Program? Surely the statement that there are minor changes in federal programs every two years and major every four, seems to be a basic triusm that should be considered when working with any future federal program. The response time for good medical programs will probably never be understood by the politicians, either locally or nationally.

Why heart disease was not completely wiped out the second year of the program was something that they never really understood. Of interest in this regard, the first full year of national RMP, $50 million was authorized for the programs but only $2 million could be spent. This was primarily because the coordinators of the program were mainly physicians, such as Doctor Melick, who saw no sense in putting money into programs that weren't ready to go. RMP was criticized at that time for being unable to spend all this money that had been authorized. It took about two years for physicians to even tolerate RMP and another two years before they trusted the program and only recently has active support been visible from the body of physicians.

Our natural scepticism of all new medical endeavors is also not appreciated or understood by the politicians, and I, for one, have not figured out a way to explain it to them. The President stated in one of his reasons for killing RMP that it was originally established to upgrade the health care of persons threatened by heart disease, cancer, stroke, kidney disease and related disease but RMP in recent years sought more to improve access to and generally strengthen the health care delivery system. He seemed to have forgotten that in his white paper of 1971, and the 1972 budget narrative that he had asked RMP to do just this. In working with any federal program, you don't necessarily want to take everything people say too seriously.

Arizona's RMP, like most of the RMP's throughout the country, developed a core of sophisticated health providers who developed the trust of the medical community and were able to get things done. Another reason given by the President for killing RMP that in dismanteling the superstructure of RMP it would turn loose these competent people with the skills needed to make contributions to improving the health service systems in the U.S. I am afraid the logic of this escapes me completely. As I review these rambling thoughts on Arizona's RMP, perhaps the only lesson is the reaffirmation of the knowledge that with the feds, expect the illogical and always watch your backside.

HOSPITALIZATION FOR TUBERCULOSIS

SUZANNE DANDOY, M.D., M.A.

Effective July 1, 1973 the Arizona State (Tuberculosis) Sanatorium will be closed to tuberculosis patients. Individuals requiring hospitalization because of tuberculosis will be eligible for hospitalization in selected general hospitals as part of the recently implemented Tuberculosis Hospitalization Program of the Arizona State Department of Health.

As authorized in the recently amended Tuberculosis Control Act (ARS 36-718), the Tuberculosis Hospitalization Program will utilize the capabilities of certain general hospitals and specialists in pulmonary disease to provide the acute care hospitalization required by some tuberculosis patients. All costs associated with such medical care and hospitalization, which are not covered by private insurance policies, will be the responsibility of the Department of Health.

If you have a patient who needs hospitalization because of suspected or diagnosed tuberculosis, please contact Dr. Suzanne Dandoy, State Tuberculosis Control Officer (602-271-5365) or Mr. Sheldon Elman, Chief of the Tuberculosis Control Section (602-271-4540) to arrange for hospitalization and medical care under provision of the Tuberculosis Hospitalization Program.

Please note that patients must be authorized for admission into the program before being eligible to receive hospitalization and medical care benefits under provision of the Tuberculosis Hospitalization Program.

In Memoriam



FRED C. MERKLING, JR., M.D.
1931-1973

"It is our sad duty to bid farewell to Fred Merkling, a young physician whose career was ended suddenly and tragically. In the short time that he has resided in Phoenix he became known to only a small number of his professional colleagues. His sincere and energetic efforts in behalf of his patients despite personal handicaps were appreciated by all who knew him.

"Our sincere sympathy goes out to his surviving spouse, his mother and his two children."

ArMA Medical History

CANCER IMMUNOTHERAPY

A NEW EXPLANATION FOR SOME OLD OBSERVATIONS

DRY GULCH JAKE

Those who walked the halls of medical training, in the days of Ehrlich's side chain theory, and Metchnikoff's phagocytes (they were Nobel Prize winners in 1908) those of us who trained at that era should refurbish our memories of some of the other pioneer immunologists.

The jargon has become more sophisticated, at least it has changed but they are again talking about the same things. Just as shock wards are now Intensive Care Units, with miles of space craft gadgetry, so now radioimmune assay, autoimmune reactions, immunofluorescence, and immunosuppressive agents have replaced amboceptors and Erhlenmeyer flasks.

Some will recall that Cooley's Toxin, when injected intravenously in sufficient dose lead to a "cure" of a number of bone sarcomas. Cooley's cases were well documented, but his observations were looked upon askance by his contemporaries. Some other kinds of "shock" therapy lead to unexplained remission in various tumors. This was observed to occur occasionally after typhoid vaccine intravenously, given for various reasons in the '20s and '30s, and in patients treated in the Kettering hypertherm. Yes, this is the same Kettering of the automobile self-starter fame.

Now comes the observation that BCG vaccine, may on occasion, stimulate the body immune responses and control melanoma metastases and other neoplasms for a longer or shorter period.

This was not exactly what Calmette had in mind when he and Guerin were testing bile treated tubercle bacilli on calves. Professor Calmette[1] wrote this account of their work while incarcerated by "Le Bosche" during WW I. Doctor Soper who translated Professor Calmette's treatise on "L' Infection bacillaire et lia tuberculose chez l'homme et chez les animaux," Soper wrote in the preface to the English edition that "never, probably, in the rush of this very work and of his varied services, would time have been found for such an undertaking had not Professor Calmette been forced to undergo the hardship of an internment at Lille throughout the great war."

Professor Calmette in this text relates this great moment of immunological research in the following words: and we quote it in its entirety because of the great controversies which have raged about BCG vaccine, it has never been received with great favor in this country, but developing countries have found it very useful. And then I would direct your attention to the last paragraph which delineates the great compassion and faith which the man still had in human nature despite his persecution during a war "to end all wars".

"Following some observations which Guerin and I had made on the subject of the modifications undergone by tubercle bacilli from cultures in their passage through the digestive tract, we were led to the finding that the bacillus grows perfectly upon media with a basis of potato or agar, saturated with pure bile glycerinated to 5 per cent. Furthermore after a certain number of successive replantings upon this meduim, the bacillus acquires quite special physiological characters. The cultures greatly resemble those of the bacillus of glanders in appearance and their virulence diminishes progressively to such a point that, after about 70 replantings upon bile media, a calf will tolerate very well the injection of 100 mgms., whereas 3 mgms. of the same strain of bacilli, maintained in a parallel manner upon ordinary glycerin potato, produces in animals of the same age a fatal acute miliary tuberculosis within 28 to 35 days.

1. Tubercle Bacillus Infection and Tuberculosis In Man and Animals. Albert Calmette — Williams & Wilkins Company, 1923, pp 654-657.

The only effect of this massive infection is to cause general disease which is like a typhoid fever and which cures itself spontaneously after 15 to 20 days of fever, without producing the slightest tubercle formation, — as proved by subsequent autopsy of the animals. But at the same time it induces the formation of an abundance of *antibodies* and *agglutinins* which can be demonstrated in the serum.

Calves which receive 2 doses, one month apart, of 5 to 20 mgms. of biliated bacilli can be submitted, after still another month, to the test inoculation, – always intravenous, – of 3 mgms. of virulent bacilli, without manifesting the least malaise. They remain perfectly well. We have kept some of them longer than 18 months without its ever being possible to discover at autopsy the smallest tubercle in the lungs, abdominal viscera or different gland groups. *******

Since 1913 we have been studying, upon a series of cattle, the delayed effects of this method of vaccination from the point of view of the intensity and duration of resistance to natural contamination by a prolonged confinement with adult animals which have open lesions. To this end we arranged a stable so that one row of young cattle can be placed side by side behind a row of tuberculous animals which are abundantly discharging bacilli in their dejections. There is always a vaccinated animal on either side of a normal control, and all are fed from a common trough.

Our experiments were unfortunately interrupted by the war, but it appears, in so far as we are at present able to judge, that the use of our biliated bacillus is certainly without harm and that, if its efficacy as a vaccine-virus asserts itself, prophylaxis against tuberculosis in cattle would be possible and practical. From the point of view of manipulation, it is devoid of danger, as it is with regard to a later elimination in the dejections or in milk, inasmuch as it has lost all capacity for forming tubercles. We have convinced ourselves that man will safely tolerate the injection of one one-hundredth of a milligram intravenously and meanwhile this bacillus has retained the property, — which is essential for the production of anti-tuberculous immunity – of being able, as a simple saprophyte, to live in symbiosis with lymphatic cells, without altering them. Naturally, the use of this vaccine can pretend to nothing more than to produce in animals the same conditions in relation to superinfections as are presented by already tuberculous subjects. The sole advantage — assuredly not negligible — which it can procure to them is that of protection against the forms of tuberculosis which, through the progressive extension of their lesions and the resulting emaciation and cachexia, are prejudicial to the economic interests of cattle raisers and to public health.

I am bold enough to add that the proposal of its future use for the vaccination of children seems not improbable. To this end we are preparing a bacillus of the human type which, after having been carried through a long series of grows upon media with a basis of human bile to begin with, and then of beef bile, has lost its faculty of producing tuberculosis in the guinea pig and monkey. Tuberculous patients tolerate it in fairly large doses either intravenously or by ingestion and without harmful effects. It remains to be found out whether we may hope that its vaccinating powers are sufficiently sure and lasting against the natural infections of family life where there are individuals with open tuberculous lesions. But the answer to this question can come only from a prolonged experiment on a large scale and it should be carried out upon anthropoid apes in an environment absolutely protected from any contamination through man. ********

The war which has just bled and ruined Europe so terribly prevents the realization of this idea for the moment.

But I am not without hope that it will be started again, since after the madness which has driven so many of the so-called civilized nations to destroy one another, the works of reparative peace will more than ever impose upon benevolent men the duty of striving to safeguard the innumerable human lives cut down by tuberculosis before their time."

Calmette began testing his vaccine on children in 1924. Now fifty years later BCG vaccine has not only been widely used in children — as he "boldly proposed," but its immune body stimulating properties are adapted to cancer immunotherapy!

ArMA Reports

THE MINUTES APPEARING IN THIS SECTION HAVE BEEN EDITED TO CONSERVE SPACE. A COMPLETE COPY OF THE MINUTES OF ANY MEETING WILL BE MAILED TO ANY MEMBER REQUESTING THEM.

PROFESSIONAL COMMITTEE

Meeting of the Professional Committee of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, on Saturday, February 10, 1973, a quorum being present, convened at 1:45 p.m., Albert G. Wagner, M.D., Chairman, presiding.

MINUTES

The minutes of meeting held November 4, 1972 were approved as distributed.

Action of the Board of Directors during meeting held November 19, 1972 as relate to the Professional Comimittee were reviewed for information.

SECTION ON ATHLETIC MEDICINE

Dr. Wagner reported in Dr. Ward's behalf the activities of the Section on Athletic Medicine and passed out the bulletin copy (Sports Illness Treated) developed by the Section. Received for information only.

SECTION ON EMERGENCY CARE

Categorization of Emergency Rooms

Dr. Schaller informed the Professional Committee that the Section on Emergency Care met on January 11, 1973 with Dr. Schamadan to review the categorization of emergency rooms in the State of Arizona. It was determined that several steps be taken to propose categorization for Arizona hospitals and a study committee to be formed representing ArMA, the Arizona Hospital Association, Arizona Osteopathic Medical Association, and Dr. Schamadan to study the capability of each hospital's emergency room. Robert Leonard, M.D. was appointed as the representative from the Arizona Medical Association. Received for information only.

Hypnosis

SECTION ON MENTAL HEALTH

The Board of Directors during meeting held September 24, 1972, considered recommendation of the Professional Committee as regards the statement on hypnosis and referred it back for reconsideration. The statement considered by the Board of Directors is as follows:

"It was moved and carried to recommend to the Board of Directors that the Mental Health Professionals are in agreement that hypnosis, as a form of treatment for emotional illness, be used only by a properly trained physician, including psychiatrists, and also by properly trained clinical psychologists. Proper training in this reference means at least six months of training and subsequent certification of the training in an approved institution."

Dr. Cutts reviewed information received from AMA and other state associations with regards to their policies and statements on hypnosis for the Committee.

It was moved and carried to recommend to the Board of Directors that the practice of hypnosis be limited to the medical use of hypnosis by licensed physicians, including psychiatrists, licensed clinical psychologists, and licensed dentists, who are in the practice of their respective professions, and who have evidence of proper training in hyposis. Proper training in this reference means at least six months of training and subsequent certification of training in an approved institution.

Senate Bill 1067 — Insurance — Psychologists Services Benefits

Dr. Cutts presented Senate Bill 1067 — Insurance — Psychologists' Service Benefits to the Professional Committee as referred by the Legislative Committee. This legislation provides that benefits for services performed by a certified psychologist shall not be excluded from disability insurance contracts and group disability contracts leaving the freedom of choice for the subscriber to select either a physician or duly certified psychologist to provide treatment.

It was moved and carried to recommend to the Legislative Committee that no action be taken on this legislation.

Privileged Communication

Dr. Cutts brought up the subject of "privileged communication" which he indicated was discussed by the Professional Committee, the Board of Directors, and the Legislative Committee in 1969, and that to the best of his recollection, the entire subject was assigned to our legal counsel for study and subsequent preparation of legislation for introduction. Mr .Barnett was to research the subject of "privileged communication" and determine what transpired.

Dr. Cutts indicated that the AMA Mental Health Conference would be held in early April and that if Dr. Grobe, as a member of the Mental Health Committee, did not attend, he would like to represent the Arizona Medical Association.

SECTION ON SAFETY

An Introduction to a Series of Safety Communication for Public Information

Dr. Hoffmann presented the introduction to a possible series of safety articles which may be presented to the editors of the Sunday supplement, **Arizona Republic,** for discussion. It was determined to explore the possibility of a series of safety articles being run in the Sunday supplement.

SECTION ON POISON CONTROL

Management of Acute Toxicity

Concern was expressed regarding antidotal treatment of poisoning stemming from an article in a recent issue of **Arizona Medicine** by the College of Pharmacy, University of Arizona. It was suggested that Dr. Antos communicate with the American College of Toxicology, University of Arizona, College of Medicine, and/or the Pediatric Society for their most current views on treatments of poisoning for public publication in **Arizona Medicine.**

SECTION ON ArMA - ASNA LIAISON/ WOMAN'S AUXILIARY

Extended Role of the Nurse

Dr. Payne presented the proposed rules and regulations developed by the Arizona State Board of Nursing under date of January 29, 1973. Considerable discussion ensued.

It was moved and carried to offer the following resolution to the Board of Directors for their consideration:

WHEREAS, The Arizona Medical Association supports and encourages the extended role of the Nurse under the direction of a responsible licensed physician, and

WHEREAS, The proposed rules and regulations (working draft #4) fails to prescribe specific standards of training and education for the extended role of the nurse practitioner, and

WHEREAS, The proposed rules and regulations provide for the nurse practitioner to take independent action in the diagnosis (comprehensive assessment) and treatment (appropriate action) of disease, therefore be it

RESOLVED, That the Arizona Medical Association oppose rules and regulations proposed by the Arizona State Board of Nursing as working draft #4 dated January, 1973.

SECTION ON AGING AND GENERAL MEDICINE

Right to Die with Dignity

A letter was received from a Sun City resident regarding "the right to die with dignity" questioning whether the Arizona Medical Association is in the process of developing a policy such as the New York Medical Society.

It was moved and carried to receive the letter for information only.

SECTION ON PUBLIC HEALTH

Subsection on Pollution Control

Dr. Ganelin presented the minutes of the Subsection on Pollution Control of January 7 and February 4, 1973 for information. It was reported that the Arizona Health Planning Authority was in the process of developing a congress on environmental health. Concern was stated that physician representation was needed from more than Maricopa County and that staff will request representation from all county societies.

Senate Bill 1070 — Air Pollution Permit Considerations

The Pollution Control Committee recommends that the Senate Bill 1070 proposed by the Arizona State Department of Health to permit consideration of the impact of air pollution of a new source or modification of an existing source providing the authority to present evidence to the transportation agencies on the effect of any action by such agency in the maintenance of ambient air quality standards receive the general support from the Association.

It was moved and carried that Senate Bill 1070 receive general support.

Senate Bill 1069 — Monitoring Water Pollution

The Subsection on Pollution Control recommends that Senate Bill 1069, which authorizes the Department of Health to require monitoring of water pollution sources by the source of pollution and provides for confidentiality of records which are unique to the owner or operator of the source of pollution, receive general support.

It was moved and carried to recommend to the Legislative Committee that no action be taken on Senate Bill 1069.

Community Home Care Services Organization

Dr. Wagner presented the subject of "community home care services" which is a nonprofit umbrella-type organization by the community and for the benefit of the members of the community. The purpose of this organization is to make available to the community at large better health-related home care: by identifying existing agencies, organizations, civic groups, and other institutions and facilities which provide or may be involved with health-related home care services in Arizona; by identifying the unmet needs of the community for such health-related home care services; by sharing information among and by assisting and coordinating the activities of such agencies and facilities; by promoting and assisting in furnishing through the community at large health-related home care services where identified needs are unmet; by informing the medical profession and the community at large of the availability and extent of said services; and by assisting in the education and training of persons engaged in furnishing services. Dr. Wagner informed the Committee that the Maricopa County Medical Society is supporting the organization and requested that the Arizona Medical Association consider supporting it as well.

It was moved and carried to recommend to the Board of Directors that the Arizona Medical Association go on record as supporting the concept of the community home care services organization; further, that the Association have official representation to community home care services, to be determined by the Professional Committee's Section on Publie Health.

SECTION ON MEDICINE AND RELIGION

Dr. Hanss reported that the American Medical Association has discontinued their Council on Medicine and Religion. This recent action will necessitate greater activity at the state association level. Received for information only.

SECTION ON REHABILITATION MEDICINE

Dr. Spendlove informed the Committee that the Arizona Society of Physical and Rehabilitation Medicine appointed a legislative committee during their last meeting.

SECTION ON DRUG ABUSE

Uniform Controlled Substances Act

In the absence of Dr. Linkner, Mr. Barnett summarized the Uniform Controlled Substances Act introduced into the Arizona Legislature.

It was moved and carried to approve the concept of the Uniform Controlled Substances Act.

CORRESPONDENCE

Phoenix College — Zone Therapy

A letter was received from Wilfred R. Waldron, Ph.D., Associate Dean for Community Services, regarding a proposal to offer noncredit classes in Zone Therapy — Scientific Massage of Feet at Phoenix College. Dr. Waldron requested that the Association consider the course informing him of the Association's feelings.

It was moved and carried to inform Phoenix College that the Association knows of no basic scientific validity to one Therapy and, therefore, cannot endorse it as described.

Meeting adjourned 4:32 p.m.

Edward Sattenspiel, M.D.
Secretary
by
Gary L. Barnett
Associate Executive Director

EXECUTIVE COMMITTEE

The meeting of the Executive Committee of the Arizona Medical Association, Inc. held Saturday, February 24, 1973, at 810 W. Bethany Home Road, Phoenix, Arizona, convened at 3:16 p.m., John J. Standifer, M.D., President and Chairman, presiding.

MINUTES

The minutes of the meeting held November 18, 1972, were approved as distributed.

TRAVELERS INSURANCE COMPANIES

Mr. Zaccaro reviewed the annual report on the ArMA malpractice program that he intends to present to the Board of Directors on February 25, 1973. See minutes of that meeting for details. Received.

COUNCIL OF PROFESSIONS

Dr. Brewer, our representative to the subject group, indicates a need to drop from this activity.

It was moved and carried to approve W. Scott Chisholm, M.D., as our representative.

RICK DEMONT

Following considerable discussion and review of Dr. Thomas M. Foreman's letter of 12/12/72, it was determined to recommend that AMA acknowledge Mr. Rick DeMont for excelling in Olympic competition while overcoming a physical disability.

SOUTHERN MEDICAL ASSOCIATION

Dr. Standifer reviewed Joe T. Nelson, M.D.'s letter of 1/12/73 urging ArMA's participation in the Southern Medical Association. No action.

PRACTICE MANAGEMENT SEMINARS

Mr. Robinson reported that he audited a practice management seminar in Chicago. Said seminars are currently being prepared in audio-visual form and will be made available to the various states. Received.

ARIZONA HEALTH MANPOWER FORUM

Mr. Barnett reported briefly on the forum held in Wickenburg on January 19-20, 1973. Received.

AMA LEADERSHIP CONFERENCE

It was determined that Dr. Dew would report to the Board of Directors on the subject conference held February 16-18, 1973.

ARIZONA DIABETES ASSOCIATION

Mr. Robinson reported that the subject Association has moved into the lobby and things are going smoothly.

BOARD OF DIRECTORS

The committee reviewed the agenda of the Board and made certain recommendations for presentation to the Board.

OTHER BUSINESS

Arizona Town Hall

It was agreed that the Executive Committee, along with Wallace A. Reed, M.D., and Donald Schaller, M.D., would make itself available to the NAU staff that is preparing material for the 1973 Arizona Town Hall in October, 1973.

Medical Education Committee

Dr. Sattenspiel reported that members of the medical education committee will be meeting with Merlin K. DuVal, M.D., Vice-President for Health Sciences, U of A with regard to continuing the CESA program after Regional Medical Programs is phased out.

State Laboratory Advisory Council

It was agreed to recommend the following as candidates for the one position on the State Laboratory Advisory Council:

Ralph A. Jackson, M.D., Tucson
Boyd H. Metcalf, M.D., Scottsdale
Wilfred M. Potter, M.D., Scottsdale
Jack H. Wilson, M.D., Phoenix
Sherwood Denton, M.D., Phoenix

Meeting adjourned 5:45 p.m.

Edward Sattenspiel, M.D.
Secretary

BOARD OF DIRECTORS

The meeting of the Board of Directors of the Arizona Medical Association, Inc., held at 810 West Bethany Home Road, Phoenix, Arizona, February 25, 1973, a quorum being present, convened at 10:07 a.m., John J. Standifer, M.D., President and Chairman, presiding.

WELCOME

Dr. Standifer extended a welcome to the county medical society presidents and the various guests.

MINUTES

Minutes of the meeting held November 19, 1972, were approved as distributed.

TRAVELERS INSURANCE COMPANIES

Mr. Zaccaro, Assistant Secretary of the Travelers, reported on the current status of the program as indicated below:

ArMA Professional Liability Program
Distribution of Physicians and Surgeons Written During 1971 and 1972

Class	Description	Number of Doctor Years* 1971	%	1972	%	Basic Coverage Written Premium 1971	1972
I	Physician—No Surgery	221.4	30.2	309.4	36.0	$ 96,898	$ 138,383
II	Physicians—Minor Surgery	115.9	15.8	160.1	18.6	84,933	117,382
III	Surgeons						
	Ophthalmologists	29.5		35.7		48,523	58,368
	Proctologists	1.0		0.0		1,656	
	All Other	126.1		135.6		204,906	227,236
	Total Class III	156.6	21.3	171.3	19.9	255,085	285,604
IV	Surgeons—Specialists						
	Cardiac Surgeons	1.0		0.1		2,208	102
	Otolaryngologists—No Plastic Surgery	7.0		7.1		15,456	14,082
	Surgeons—General	70.1		53.9		154,183	119,918
	Thoracic Surgeons	9.0		9.0		19,872	18,321
	Urologists	26.0		21.0		58,944	47,122
	Vascular Surgeons	7.0		3.0		15,456	6,624
	Total Class IV	120.1	16.4	94.1	11.0	266,119	206,169
V	Surgeons—Specialists						
	Anesthesiologists	25.4		35.8		67,616	101,664
	Neurosurgeons	16.6		6.0		46,576	17,492
	Obstetricians—Gynecologists	40.9		28.7		113,656	81,577
	Orthopedists	22.0		34.7		60,677	97,398
	Otolaryngologists—Plastic Surgery	11.0		12.9		30,349	34,917
	Plastic Surgeons	4.0		6.0		11,343	17,326
	Total Class V	119.9	16.3	124.1	14.5	330,217	350,374
	Grand Totals	733.9	100.0	859.0	100.0	$1,033,252	$1,097,912

*Doctor Year — One Doctor insured for one year

ArMA Professional Liability Program
Miscellaneous Classifications

Description	Number Written 1971	1972	Written Premium 1971	1972
Employed Physician — Class I	4.0	32.0	$ 568	$ 4,719
Employed Physician — Class II	7.0	33.0	2,602	5,493
Employed Physician — Class III		5.0		2,793
Employed Physician — Class IV		3.0		2,150
Employed Physician — Class V		5.3		6,350
Employed Technicians—radium, laboratory or pathological	11.0	77.3	227	2,022
X-ray Therapy by Employed Physicians or Surgeon		1.0		185
Employed Technicians — X-ray Therapy		4.9		313
Physicians — Class I — Military Service		3.4		344
Physicians — Class II — Military Service		3.0		450
X-ray Therapy by Insured Physicians — Class I and II	5.0	21.8	2,810	12,370
Totals	27.0	189.7	$6,207	$37,189

Mr. Zaccaro indicated that as of 12/31/73, 859 members are taking advantage of the program which more than meets the enrollment projections made in April of 1971.

Program Changes

Mr. Zaecaro reminded the Board that the bureau rates had increased 25% over the past two years, but that Travelers had not increased their rates, to which they were entitled. He did indicate that some classifications will experienee minor rate adjustments upon renewals made after June 1, 1973, probably about 6%, with some classifications paying reduced rates.

He also stated that certain new benefits will be added to the program AT NO EXPENSE. The required office premises insurance, a defendants reimbursement plan, a non-ownership automobile liability plan, and elimination of the "policy-charge" fee will go into effect 6/1/73.

It was determined that Mr. Zaccaro will make a presentation to the House of Delegates at their meeting on April 24, 1973.

REPORT RECEIVED.

ArMPAC BOARD OF DIRECTORS

Dr. Standifer read Dr. Langston's report as follows:

"The Arizona Medical Political Action Committee has little to report at this time during an off election year. As usual, our annual membership drive is under way, and we hope we will be as successful in 1973 as we were in 1972. I would urge all members of the Board of Directors who have not already done so to please send in their annual dues of $20.00. Those who wish to become sustaining members of ArMPAC, the dues are $100.00.

The speaker for our Arizona Medical Political Action Committee banquet during the state convention of the Arizona Medical Association will be the Hon. Burton Barr. He will speak on the status of current health legislation in Arizona.

Several members of ArMPAC will journey to Washington, D.C., next month for the annual American Medical Association-American Medical Political Action Committee Public Affairs workshop."

RECEIVED.

BOARD OF DIRECTORS

Southeastern District Director

Resignation of William W. McKinley, M.D., as Southeastern District Director was accepted with regret. It was determined that the effective date would be April 28, 1973, so that his replacement could be elected by the House of Delegates at that time.

Nominees to Arizona Health Planning Authority

It was moved and carried to recommend the following as nominees for the vacancy on the Arizona Health Planning Authority — Term 2/1/73-76:

Walter R. Eicher, M.D.
William W. McKinley, M.D.
Seymour I. Shapiro, M.D.

Community Service Award

It was moved and carried to elect Robert Blake, M.D., Tucson, to be the recipient of The A. H. Robins Community Service Award.

Dr. Rodman E. Sheen and Thomas G. Sheen Award

It was determined not to submit a candidate's name for this award. RECEIVED.

P.S.R.O. Resolution

It was moved and carried that the Board of Directors introduce the following resolution in the House of Delegates for their consideration:

"RESOLVED, That the Arizona Medical Association wholeheartedly endorses the United Medical Care Foundations of Arizona, Inc., as the organization best qualified to be the Professional Standards Review Organization (P.S.R.O.) for the region encompassing the State of Arizona."

EXECUTIVE COMMITTEE

Apache County Medical Society

(a) Herman A. Kling, M.D. — Active to Active-Over 70 — Account Age — Dues Exempt — Effective 1/1/73.

Coconino County Medical Society

(a) Thomas M. Leenhouts, M.D. — Active to Associate — Account Retirement — Dues Exempt — Effective 1/1/72.

Greenlee County Medical Society

(a) Myron R. Baumgartner, M.D. — Active to Associate — Account Retirement — Dues Exempt — Effective 1/1/73.

Maricopa County Medical Society

(a) Osear W. Friske, M.D. — Active to Active-Over 70 — Account Age — Dues Exempt — Effective 1/1/73.

(b) Carl A. Holmes, M.D. — Active to Associate — Account Illness — Dues Exempt — Effective 1/1/73.

(c) John S. Kruglick, M.D. — Active to Associate — Account Retirement — Dues Exempt — Effeetive 1/1/73.

(d) James Lytton-Smith, M.D. — Active Associate — Account Retirement — Dues Exempt — Effective 1/1/73.

(e) Martin J. Ryan, M.D. — Active to Active-Over 70 — Account Age — Dues Exempt — Effective 1/1/73.

(f) Robert M. Stump, M.D. — Aetive to Active-Over 70 — Aeeount Age — Dues Exempt — Effective 1/1/73.

Pima County Medical Society

(a) Charles W. Elkins, M.D., Active to Associate — Account Retirement — Dues Exempt — Effective 1/1/73.

(b) William J. Liccione, M.D. — Request for dues exemption for 1972 — Aceount financial hardship.

Pinal County Medical Society

(a) Ward D. Coffman, M.D. — Request for six months delay in paying 1973 dues — Approved subject to concurrence of County Society.

(b) Henry M. Stufflebam, M.D. — Active to Associate — Account Retirement — Effective 1/1/73.

ARTICLES OF INCORPORATION & BYLAWS COMMITTEE

Resolution A-1-73 — Intern & Resident Membership

It was moved and carried to have the Board of Directors introduce the following resolution in the House of Delegates:

"RESOLVED, That Chapter II — Membership, Section 3. — Classes of Membership — (A) Active Members — be amended to read:

All active members of all the county societies shall be active members of this Association. The minimum qualifications for active membership (OTHER THAN FOR INTERNS AND RESIDENTS) in a county society shall be that the individual must (1) hold the degree of doctor of medicine or its equivalent or doctor of osteopathy, (2) be an American citizen, or have made application for American Citizenship papers (in which case, he must make reasonable progress toward full citizenship or his membership shall lapse), (3) hold an unrevoked license to practiee medicine and surgery or osteopathic medicine and surgery in the State of Arizona, and (4) be a legal resident of the State of Arizona, (5) fulfill the continuing medical education requirements of the Arizona Medical Association. Subject to these minimum qualifications and to the provisions for loss of membership (Chapter II, Section 4), each county society shall be the exclusive judge of the qualifications of its members.

INTERNS AND RESIDENTS WHO ARE LICENSED OR REGISTERED WITH THE BOARD OF MEDICAL EXAMINERS, STATE OF ARIZONA, ARE ELIGIBLE FOR ACTIVE MEMBERSHIP IN A COUNTY SOCIETY.

Rights. An active member shall have all the rights and privileges of the Association as herein provided. INTERNS AND RESIDENT ACTIVE MEMBERS SHALL PAY ONE TENTH THE DUES OF OTHER ACTIVE MEMBERS BUT WILL BE EXEMPTED FROM SPECIAL ASSESSMENTS: and be is further

RESOLVED, That Chapter II — Membership, Section 3, Classes of Membership — (C) Associate Members — be amended to read:

Associate members may be elected by the Board, upon recommendation of the society of the county in which such members reside, from those doctors of medicine or osteopathy, who are licensed to practice medicine and surgery or osteopathie medicine and surgery in Arizona, but are (1) disabled and unable to practice, (2) retired from active practice and not eligible for Fifty-Year Club membership, (3) active members who leave practice to undergo a further training period lasting six months or more, or for military service **(or (4) interns and residents who are participating in an approved internship or residency program in the State of Arizona.)** and be it further

RESOLVED, That Chapter II — Membership, Section 4. Loss of Membership (a) be amended to read:

(A) Active, Associate or Fifty-Year Club membership in this Association shall be lost by:

(i) Final expulsion from the county society through which he is an active member of the Association.

(ii) Transfer of membership to a county society of another state, and thereby to another state association, except as provided in Chapter III, Section 3.

(iii) Voluntary resignation, which shall be without prejudice.

(iv) Action of the House of Delegates (see Chapter VI, Section 6; Chapter VIII, Section 9).

(v) Revocation of the member's license to practice in Arizona. This latter clause shall effect immediate loss of membership as of the date of revocation.

(vi) TERMINATION OF BOARD OF MEDICAL EXAMINERS REGISTRATION OF INTERN OR RESIDENT ACTIVE MEMBER. THIS LATTER CLAUSE SHALL TAKE EFFECT AT THE END OF THE CALENDAR YEAR.

(vi) (vii) Failure to maintain membership in good standing in the American Medical Association.

(vii) (viii) Failure to pay Association dues and assessments within one year of the date such become payable, unless such failure be exempted under Chapter IX, Section 5.

(viii) (ix) For active membership, failure to fulfill the continuing medical education requirements of the Arizona Medical Association elsewhere in the bylaws; and be it further

RESOLVED, That Chapter IX — Dues and Assessments Section 3. Equality Within Membership Categories of Dues and Assessments — be amended to read:

While the amount of dues or special assessments may vary as between classifications of membership (except as to certain classes upon which none may be levied as provided in subsection 5 hereof), they shall be uniform within each classification, EXCEPT FOR INTERN AND RESIDENT ACTIVE MEMBERS (SEE CHAPTER II, SECTION 3).

Note: All bracketed, bold face words represented deletions; all fully capitalized words are new material."

Resolution A-2-73 — Service Members

It was moved and carried to have the Board of Directors introduce the following resolution in the House of Delegates:

"RESOLVED, That Chapter II — Membership, Section 3 — Classes of Membership (D) Service Members — be amended to read:

Upon recommendation by a county society, the Board may elect as service members regularly commissioned medical officers and commissioned medical officers of the reserve component who hold the degree of Doctor of Medicine or Bachelor of Medicine or Doctor of Osteopathy, on extended active duty with the United States Army, the United States Navy, the United States Air Force, the United States Public Health Service and the permanent medical officers of the Veterans Administration.

Rights. Service members shall have all the rights and privileges of active members **(except the right to serve as Delegates or to hold elective office)**. They shall pay one-quarter the dues of active members (.) BUT WILL BE EXEMPTED FROM SPECIAL ASSESSMENTS.

Note: All bracketed, bold face words represented deletions; all fully capitalized words are new material."

FINANCE COMMITTEE

Financial Statement for Period Ending 1/31/73

Dr. Shapiro reviewed the financial statement for the period ending January 31, 1973 — RECEIVED.

Budget for Office of the President

It was moved and carried that the President's expenses be paid for attending both American Medical Association yearly meetings, and in addition, an amount of five thousand dollars ($5000.00) be budgeted for the office of the President.

Resolution 1-73-1974 Budget

It was moved and carried to have the Board of Directors introduce the following resolution in the House of Delegates:

"WHEREAS, It is customary for the House of Delegates to approve the Budget of Income and Expenditures for the next succeeding calendar year of the Arizona Medical Association, Inc.; therefore be it

RESOLVED, That the following Budget of Income and Expenditures for the calendar year 1974 be adopted as follows:

	Income	Expenditures	Contingency
General Operations	$222,500	$207,200	$ 15,300
Committee Operations	3,000	33,940	(30,940)
Annual Meeting	38,900	33,660	5,240
Publishing Operations	61,880	54,000	7,880
Building Operations	31,400	23,500	7,900
Benevolent & Loan	600	500	100
TOTAL	$358,280	$352,800	$ 5,480

; and be it further

RESOLVED, That the annual dues of the Arizona Medical Association, Inc., be continued at $120 for Active members with $110 going to General Operations Budget and $10 going to the Publishing Operations Budget; and be it further

RESOLVED, That the Service member dues be $30 with $20 going to the General Operations Budget and $10 going to the Publishing Operations Budget; and be it further

RESOLVED, That the Intern or Resident Active member dues be $11 with $1.00 going to the General Operations Budget and $10 going to the Publishing Operations Budget."

GOVERNMENTAL SERVICES COMMITTEE

Medicredit

It was moved and carried to reaffirm this Association's endorsement and support of the AMA's Medicredit Bills (S. 444 and H.R. 2222).

Appointment Confirmation

It was moved and carried to confirm the appointment of Charles Kalil, M.D., as Chairman of the section on Indigent Care of the Governmental Service Committee.

State Department of Health Services

It was moved and carried to adopt the following statement as the position of the Association:

"The Arizona Medical Association feels that the administration is justified in making an effort to con-

solidate and coordinate all state health-related agencies in the interest of administrative efficiency and economy only if this can be accomplished without the interposition of a bureaucratic structure which would interfere with quality medical care for all the people of Arizona."

LEGISLATIVE COMMITTEE

Appointment Confirmation

It was moved and carried to confirm the following appointments to the Legislative Committee:

Ratibor Pantovich, D.O. — 1973-76
Berton Siegel, D.O. — 1973-76
William L. Smith, D.O. — 1973-76

Guidelines for Abortion

It was moved and carried to support the following statement on abortion promulgated by the Arizona Obstetrical and Gynecological Society and the Arizona Section of the American College of Obstetricians and Gynecologists:

"As a result of the recent decision by the United States Supreme Court, and the recent opinion of the Arizona Court of Appeals, a revision of our State laws concerning the performance of therapeutic abortion is to be anticipated. The Arizona Obstetrical and Gynecological Society and the Arizona Section of The American College of Obstetricians and Gynecologists, believing that any policy covering abortions must be designed to safeguard the patient's health, strongly urge that future regulations governing therapeutic abortion incorporate the following recommendations:

1. Abortion should be performed only in facilities approved by the Joint Commission on Accreditation of Hospitals and/or licensed by the State. It is recommended that these facilities have full surgical, anesthetic and resuscitation equipment available, and that they should maintain the same surgical, anesthesia and personnel standards as are available to the hospitalized patient.
2. A. For pregnancies that do not exceed eleven weeks gestational age (or thirteen weeks from the patient's last menstrual period) no consultation is necessary.
 B. For those pregnancies that are beyond eleven weeks gestational age (or thirteen weeks past the last menstrual period) but not beyond twenty weeks gestational age (or twenty-two weeks from the last menstrual period) consultation with a recognized specialist in obstetrics and gynecology is required.
3. The woman seeking abortion should be assured all possible privacy with all records confidential, serviees must be made available to the patient with limited financial resources so that all women have equal access to legal abortion without discrimination, and the patient must be able to have the procedure performed with relative dispatch.
4. The patient should have every opportunity for sound abortion counseling so that she understands what abortion means, is sure that this is what she wants, has thought through the possibility of continuing the pregnancy as an alternative to abortion, has considered how therapeutic abortion will affect her conscience and value system, and is knowledgeable about effective methods of contraception and their availability.
5. It should be emphasized that abortion is not to be looked upon as a solution to the problem of population control.
6. Abortion has been the focus of much controversy in our society and the right to conscientious objection on the part of the physicians and other hospital personnel must be respected. No individual should be required to perform or participate in abortion against his moral or religious principles."

MEDICAL EDUCATION COMMITTEE

Dr. Standifer reviewed the report of the subject committee dated 2/23/73 setting forth recipients of the 1972 Certificate in Continuing Medical Education and consolidated it as follows:

"348 physicians have received their 1972 Certificate of Continuing Medical Education as of February, 1973. 261 members have received their 1972 Certificate in Continuing Medical Education as of February, 1973. 45 members now who were not members when the applications were sent out in October, 1971, have received their 1972 Certificate in Continuing Medical Education as of February, 1973. 42 nonmembers have received their 1972 Certificate in Continuing Medical Education as of February, 1973."

A detailed listing of recipients is available from the Association offices.

OCCUPATIONAL HEALTH COMMITTEE

The Board received the following action taken by The Industrial Commission of Arizona on December 29, 1972:

"WHEREAS pursuant to the provisions of A.R.S. Section 23-908, The Industrial Commission of Arizona is required, and has full power, jurisdiction and authority, to fix a schedule of fees to be charged by physicians attending injured employees, which shall be reviewed annually by the Commission, and

"WHEREAS the Commission, after carefully reviewing all material and documentation previously received, including the U. S. Price Commission's Regulations, in order to evaluate the fee schedule for physicians, in its regular meeting on December 29, 1972, unanimously voted to approve the following:

1. Continuation of the fee schedule, based on the 1964 California Relative Value Studies the Commission had previously published, to be effective February 1, 1973.

2. Approval of the use of the 1970 A.S.A. Relative Value Guide, without modifying factors, as the basis of charges for anesthesia.

3. Conversion factors to be applied to the new schedule, effective February 1, 1973:

(a) Medicine	$8.0
(b) Surgery	7.25
(c) Radiology	7.25
(d) Laboratory	6.5
(e) Anesthesia	8.0

Code No.		
0006	Expert testimony at hearing, per one-half day session:	
	First hour or part thereof	$60.00
	Each additional hour or part thereof	30.00

NOW, THEREFORE, BE IT RESOLVED that the Industrial Commission of Arizona continues the schedule of fees previously submitted for its consideration at its regularly scheduled meeting on December 29, 1972, and approval of such new schedules considered, and that the fees to be charged by physicians attending injured employees shall be in accordance with said schedules of fees, and

BE IT FURTHER RESOLVED that The Industrial Commission of Arizona adopts the following conversion factors to be applied to the schedules of fees herein adopted effective February 1, 1973, and to continue in effect until further action by this Commission:

(a) Medicine	$8.0
(b) Surgery	7.25
(c) Radiology	7.25
(d) Laboratory	6.5
(e) Anesthesia	8.0

BE IT FURTHER RESOLVED that while an individual practitioner may charge fees up to the amounts delineated in the schedule herein adopted, any such increase in fees charged over and above the fee schedule establishd December 30, 1970, must be justifiable under the U. S. Price Commission's Regulations and Guidelines (6 CFR Part 300)."

PROFESSIONAL COMMITTEE

Hypnosis

It was moved and carried that the position of this Association is that the practice of hypnosis be limited to licensed practitioners of the healing arts in the practice of their respective professions.

Extended Role of the Nurse

It was moved and carried to adopt the following resolution as the position of this Association:

"WHEREAS, the Arizona Medical Association supports and encourages the extended role of the nurse under the direction of a responsible licensed physician, and

WHEREAS, the proposed rules and regulations (working draft number four) fail to prescribe specific standards of training and education for the extended role of the nurse practitioner, and

WHEREAS, the proposed rules and regulations provide for the nurse practitioner to take independent action in the diagnosis (comprehensive assessment) and treatment (appropriate action) of disease, therefore,

BE IT RESOLVED that the Arizona Medical Association oppose the rules and regulations proposed by the Arizona State Board of Nursing as working draft #4 dated January, 1973."

"Community Home Care Services"

It was moved and carried that the Arizona Medical Association go on record as supporting the concept of the Community Home Care Services Organizations; further, that the Association have official representation to "Community Home Care Services," to be determined by the Professional Committee's Section on Public Health.

The request that this Association provide office space, telephone service, etc., was referred to the Executive Committee for action.

AMA DELEGATES REPORT

Dr. Cloud reviewed in depth the actions of the House of Delegates of the AMA meeting in Cincinnati November 26-29, 1972. He pointed out that copies of all actions can be obtained from ArMA headquarters upon request to Bruce E. Robinson, Executive Director.

CORRESPONDENCE

Woman's Auxiliary letter 1/15/73

A letter from Mrs. Thomas B. Jarvis, President-Elect of the Woman's Auxiliary, thanking the Association for financial support, was received.

AMA letter 12/14/72 — Unified membership

Dr. Standifer read the following letter from Ernest B. Howard, M.D., Executive Vice-President:

"Arizona is one of six states that have recognized the importance of unity within medical organizations by voluntarily establishing a unified membership program.

The Board of Trustees has requested me to extend its sincere appreciation for your continued support of the unified concept. In our efforts to build an even stronger national organization, we are confident other states will soon look to Arizona's action as an example of organizational fairness worthy of their serious consideration."

Christmas Bonus — Staff

The letter from ArMA staff expressing thanks for the annual Christmas bonuses was received.

LACMA — MEDIX Request

The letter dated 2/7/73 from Los Angeles County Medical Association requesting a contribution of $1,000 in support of the MEDIX-TV series was received. NO ACTION.

OTHER BUSINESS

County Society Visitation Reports

Doctors Cloud, Hoffmann, Lovett, McKinley, Shapiro and Standifer reported on their visitations to various county medical societies since the last Board of Directors meeting. All expressed the idea that the visitations were of value in communicating with the membership.

P.S.R.O. and the United Medical Care Foundations of Arizona, Inc.

Dr. Standifer reported that the United Medical Care Foundations of Arizona, Inc., had applied to be the Professional Standards Review Organization for Arizona. He noted that a more detailed application was in the process of being prepared. RECEIVED.

Separation of Arizona Blue Shield from the control of the Arizona Medical Association's House of Delegates

The three proposed questionnaires on the subject matter written by Patrick P. Moraca, M.D., John C. Foster, and Professor Bruce D. Merrill, Professor of Political Science, Center for Urban Studies, Arizona State University, were reviewed. Dissatisfaction was expressed toward all three.

It was moved and carried that a survey should be made and that said survey was to be prepared by John C. Foster, Donald F. Greiss, M.D., Patrick P. Moraca, M.D., Bruce E. Robinson, and Seymour I. Shapiro, M.D.

AMA Leadership Conference

Philip E. Dew, M.D., reported on the AMA's Leadership Conference held February 16-18, 1973, which was attended by John J. Standifer, M.D., Philip E. Dew, M.D., Patrick P. Moraca, M.D., Robert E. T. Stark, M.D., and Bruce E. Robinson.

Meeting adjourned 3:32 p.m.

Edward Sattenspiel, M.D.
Secretary

LEGISLATIVE COMMITTEE

Meeting of the Legislative Committee of the Arizona Medical Association, Inc., held at 810 W. Bethany Home Road, Phoenix, Arizona, on Sunday, March 18, 1973, a quorum being present, convened at 10:10 a.m., Richard O. Flynn, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held January 21, 1973 were approved as distributed.

INTRODUCTION OF NEW MEMBERS

Dr. Flynn introduced Drs. Ratibor Pantovich and Berton Siegel as new members of the Committee representing the Arizona Osteopathic Medical Association.

REVIEW OF LEGISLATIVE ACTIVITIES

Mr. Barnett reviewed the legislative activities since the last meeting of the Committee and development of bills acted on at that time.

Senate Bill 1067 — Insurance — Psychologists' Service Benefits

During meeting held on January 21st the Committee referred Senate Bill 1067 to the Section on Mental Health of the Professional Committee for their consideration and recommendation. This bill provides that benefits for services performed by a certified psychologist shall not be excluded from disability insurance contracts and group disability insurance contracts and that an individual shall have freedom of choice to select either a physician or a duly certified psychologist for treatment. The Professional Committee and the Section on Mental Health recommend that this bill receive no action.

It was moved and carried to receive Senate Bill 1067 for information.

CONSIDERATION OF LEGISLATION

Senate Bill 1126 — Health Care Institutions; Information; Licensure

Senate Bill 1126 permits the disclosure of information received from health care institutions by the State Health Department to licensing boards of health-related services personnel for the purpose of assisting in deterring certain unprofessional acts, including but not limited to the giving or receiving of rebates in conneetion with professional services rendered in health care institutions. Dr. Kossuth pointed out that the bill had been amended to a certain extent as to weaken the authority of the State Department of Health in deterring of unprofessional acts within licensed institutions.

It was moved and carried to offer general support to Senate Bill 1126 and to assist in strengthening the Act.

House Bill 2267 — Acupuncture Not Prohibited

House Bill 2267 provides that usage of acupuncture shall not be prohibited by the Boards of Medical Examiners and Osteopathic Physicians and Surgeons without substantial proof that acupuncture is harmful to the human body. Further, provides that acupuncture may be used only by a physician (M.D., D.O.) or a person acting under a written order of a M.D. or D.O.

Drs. William McGarey and Gladys McGarey presented the subject of acupuncture to the Committee in behalf of the proposed legislation. Considerable discussion ensued based on the "statement of acupuncture" by the Board of Medical Examiners and the effects of the legislation.

It was moved and carried to recommend to the Board of Dirctors support in principle of legislation which would define acupuncture as the practice of medicine; further, that the Board of Directors discuss this entire matter with the Board of Medical Examiners.

Senate Bill 1220 — Medical Student Scholarships

Senate Bill 1220 introduced by Senator Hal Runyan provides for scholarships for medical students who will serve five years in geographical areas of need. It was pointed out that the concept was presented to Senator Runyan by William R. Myers, M.D. due to his concern of physicians' distribution.

It was moved and carried to offer general support to Senate Bill 1220; further, to approve of an amendment which would broaden the legislation to include future Colleges of Medicine and Osteopathic Colleges of Medicine and Surgery.

Senate Bill 1233 — Drug Treatment for Minors

Senate Bill 1233 provides that a minor under the influence of drugs may seek and obtain medical assistance striking the twelve years of age or older consent limitation presently in law.

It was moved and carried to not support Senate Bill 1233 due to the concern for treating minors under the age of twelve without parental consent.

Senate Bill 1254 — Drug Detoxification — Methadone Regulations

Senate Bill 1254 enables the State Department of Health to adopt drug detoxification and maintenance standards and regulations controls.

It was moved and carried to offer general support to Senate Bill 1254; further, that the portion of the Bill enabling self-administered doses of Methadone be either deleted or amended to restrict it eonsiderably.

Senate Bill 1263 — Physician as Coroner

Senate Bill 1263 provides that a Justice of the Peace may appoint a lieensed physician as coroner.

It was moved and carried to offer general support to Senate Bill 1263, however, recommend that the Bill be amended striking the word "medical" before "physician," so as to provide for both an M.O. or D.O. in this capaeity.

Senate Bill 1319 — Professional Schools Accreditation

Senate Bill 1319 provides that applicants to practice healing arts must be graduates of schools accredited by accredited agency recognized and approved by the National Commission on Accrediting and the United States Office of Education, U. S. Department of Health, Education, and Welfare.

It was moved and carried to reaffirm our support of Senate Bill 1319.

House Bill 2132 — Health Care Institutons — Licenses — Permits

House Bill 2132 reinserts language into the statutes permitting the State Health Department to establish minimum standards and requirements for construction modification and licensure of health care institutions

necessary to assure the public health and safety and welfare. The standards and requirements of the State Department of Health shall relate to not only construction and modification thereof, but to staffing, record keeping, sanitation, nursing and personal care services, and the record keeping pertaining to the administration of medical nursing and personal care services in accordance with generally accepted practices of health. The bill provides that the Board shall use the current standards adopted by the Joint Commission on Accreditation and the American Osteopathic Association's Commission on Accreditation as guidelines in prescribing minimum standards and requirements. Further, the bill provides that institutions shall submit a statement of charges that clearly separates routine services from services ordered specifically for the patient by his physician.

It was moved and carried to offer general support to House Bill 2132, however, to recommend deletion of the Board using the Joint Commissions' standards as guidelines and deleting the provision for separating charges.

House Bill 2171 — Health Services Manpower Commission

House Bill 2171 establishes a health services manpower commission bringing together all autonomous licensing and regulatory policies for health personnel. The bill consolidates staff and location and provides that the health services manpower commission oversees numbers, education, training, duties, and performance, as well as providing for the orderly growth of present and future allied health services personnel. This act also provides a mechanism to which the state can fund costs of medical education.

It was moved and carried to receive House Bill 2171 for information only.

House Bill 2240 — Prescription-Only Drugs — Samples Prohibited

House Bill 2240 provides that he manufacturer or his sales representatives may distribute prescription-only or dangerous drugs as a complimentary sample only with the written request of a physician, dentist, podiatrist, or veterinarian. The bill further provides that the request of physician shall contain the names and addresses of the supplier and the requester and the name and quantity of the specific prescription-only or dangerous drug desired.

It was moved and carried to generally support House Bill 2240.

House Bill 2253 — Certification Need — Health Care Institutions

House Bill 2253 provides for certification of admission and length of stay in health care institutions by the Board of Medical Examiners as a condition of payment of benefits.

It was moved and carried to actively non-support House Bill 2253.

House Bill 2252 — Health Facilities Authority Established.

House Bill 2252 provides for an authority to act for and on behalf of the state to acquire health care facilities. The authority would not be empowered to operate the hospital, but would be required to leave the structure to nonprofit corporations for operation. It further gives the authority to issue revenue bonds to finance the acquisition. This appears to be the major intent of House Bill 2252, which is supported by the Hospital Association.

It was moved and carried to generally support House Bill 2252.

House Bill 2043 — Health Care Service Organizations

House Bill 2043 provides for authorization of health care service organizations (HMO's) and the regulations thereof. It further prescribes licensing requirements for agents soliciting subscribers for HMO's and prescribes financial responsibilities for HMO's, as well as hospital service corporations and medical service corporations.

It was moved and carried to offer general support of House Bill 2043.

House Bill 2008 — Health Care Institutions — Financial Records

House Bill 2008 is to require all licensed health care institutions to account to the public for their rates and charges and services. The bill authorizes the Arizona Health Planning Authority to prescribe forms of financial statements, schedules, and reports to be submitted by health care institutions and authorizing the local agency to review rates and charges establishing a uniform system of accounting and prescribing forms of financial statements, schedules, and reports for comparative study. It further states that the Authority shall use the current edition of the American Hospital Association's chart of accounts as a guide for prescribing the uniform accounting system.

It was noted that House Bill 2008 repeals 36-404, limitation on disclosure of information. This section prescribes that information received and records kept by the State Health Department for the purposes of administering the chapter are confidential and shall not be disclosed except as provided by Article III (review of rates, rules, and regulations).

It was moved and carried to offer general support to House Bill 2008 and actively support amending the bill to not repeal 36-404.

House Bill 2004 — Creating Department of Health Services

House Bill 2004 is to provide an integration of health services to the people of this state in a pattern that would reduce duplication of administrative efforts, services, and expenditures through planning and coordination. It creates a department of health services which will provide a means by which people with health problems might find a solution to such problems in a single department's coordinated service. This legislation shall in no manner abridge the autonomy of the state, counties, or municipalities in carrying out their authorized functions and responsibilities. The legislature intends that the establishment of the department of health services shall be able to provide quality health care, in coordination with the private sector of health providers, to the citizens of this state; cost control mechanisms that will insure that the costs of health care to the citizens of this state are justified and equitable; control of the quantity and quality of health care facilities within the state; and that medically dependent citizens of this state receive necessary health services.

The Board of Directors in their meeting held Febru-

ary 25, 1973, adopted the following position as regards a department of health services:

The Arizona Medical Association feels that the administration is justified in making an effort to consolidate and coordinate all state health-related agencies in the interest of administrative efficiency and economy only if this can be accomplished without the interposition of a bureaucratic structure which would interfere with quality medical care for all people of Arizona.

It was moved and carried that the Association offer general support of House Bill 2004 and that the following recommendations be made to the Legislature:

1. That the Department of Mental Rehabilitation be included under the department of health services.

2. That the Advisory Board be given greater authority, particularly in the area of adopting rules and regulations.

3. Strengthen the qualifications for the director and that the assistant directors of each organizational unit where the primary purpose is health care by physicians appointed by the director from a list submitted by the Arizona Medical Association.

Meeting adjourned 2:25 p.m.

Edward Sattenspiel, M.D.
Secretary

MEDICAL EDUCATION COMMITTEE

Meeting of the Medical Education Committee of the Arizona Medical Association, Inc., held Thursday, February 22, 1973, at 810 W. Bethany Home Road, Phoenix, Arizona, convened at 7:06 p.m., Robert E. T. Stark, M.D., Chairman, presiding.

MINUTES

The minutes of the meeting held November 9, 1972 were approved as mailed.

ANNUAL MEETING EXHIBIT

Dr. Stark reported that he had been in communication with Mr. Lew Riggs, Arizona Regional Medical Program, who has offered to assist the Medical Education Committee in the preparation of the exhibit during the Association's Annual Meeting. The intent is to try to combine the Regional Medical Program's CESA Project and the Continuing Medical Education Program. Dr. Stark indicated that he will follow through with this proposal with the Regional Medical Program officials.

At Dr. Stark's request, Committee members present offered to assist in manning the exhibit during the Annual Meeting. Mr. Robinson informed the Committee that the exhibits are to be manned Tuesday, Wednesday morning, Thursday, and Friday. Other members of he Committee will be asked to participate in manning the exhibit.

SECTION ON ACCREDITATION

Dr. Sheeley informed the Committee that the Section on Accreditation had met February 7, 1973 for the purpose of reviewing pre-survey questionnaires submitted by the Marieopa County General Hospital and Good Samaritan Hospital. The Section on Accreditation determined that both institutions were eligible for survey after review of the pre-survey materials received and determined to survey them on Wednesday, March 14, 1973. The team members for the Association's initial surveys are as follows:

Maricopa County General Hospital
Robert E. T. Stark, M.D., Chairman
Melvin L. Cohen, M.D.
Albert G. Wagner, M.D.
Rutledge W. Howard, M.D., Associate Director, Department of Continuing Medical Education, AMA

Good Samaritan Hospital
William F. Sheeley, M.D., Chairman
Raymond J. Jennett, M.D.
Dermont W. Melick, M.D.
Donald W. Petit, M.D., 624 S. Pasadena Avenue, Pasadena, CA, Vice-Chairman, AMA Advisory Committee on Continuing Medical Education

Dr. Sheeley reported that the following hospitals had indicated an interest in the accreditation program by requesting the pre-survey questionnaire:

Arizona State Hospital, Phoenix
Morenci Hospital, Morenci
Veterans Administration Center, Prescott
Phoenix Baptist Hospital, Phoenix
John C. Lincoln Hospital, Phoenix
Palo Verde Hospital, Tucson
St. Joseph's Hospital, Phoenix
St. Joseph's Hospital, Tucson
Phoenix Indian Medical Center, Phoenix
Memorial Hospital, Phoenix
St. Luke's Hospital & Medical Center, Phoenix
Tucson Medical Center, Tucson
Holbrook Hospital, Holbrook
Winslow Memorial Hospital, Winslow

RECIPIENTS OF 1972 CERTIFICATE IN CONTINUING MEDICAL EDUCATION

It was reported that 306 members of the Association have submitted acceptable reports of three years of continuing medical education activities and received the 1972 Certificate in Continuing Medical Education. In addition, 42 physicians (nonmembers of the Association) submitted acceptable reports of continuing medical education activities and also received the 1972 Certificate in Continuing Medical Education. The 348 receipients of the 1972 Certificate in Continuing Medical Education are as follows:

†Signifies member now, but not when application sent out October, 1971.
‡Signifies nonmember at the time of compilation — February, 1973.

	NAME	Specialty
1.	Adamson, Richard Fred	FP
† 2.	Akerman, Louis Roy	D
3.	Alden, Neil C.	FP
4.	Alexander, Clifton Jack	FP
‡ 5.	Allers, Olga E.	PD
6.	Almgren, Ronald Charles	PD
7.	Alsever, John Bellows	IM-CD
8.	Anand, Suresh C.	A
9.	Anderson, George Harold	FP
10.	Anderson, James William	FP
11.	Antos, Robert John	IM
† 12.	Askew, Wallace Adams	OPH
13.	Austin, William Joseph	PD
† 14.	Bansal, Giridhari Lal	PD
† 15.	Baranko, Paul Victor	PD
16.	Barreto, Egeu Cesar	CD
17.	Baum, William Stanhope	IM
18.	Bayba, Lewellyn Bringle	FP
19.	Beers, Robert G.	IM
20.	Bejarano, Charles Araujo	FP
21.	Ben-Asher, M. David	IM

22.	Bendheim, Otto L.	P
‡ 23.	Bennett, Jack L. (was member)	FP
‡ 24.	Bensch, Jr., Ernest	IM
25.	Bergschneider, Charles M.	IM
‡ 26.	Betz, Thomas George	FP
‡ 27.	Bhandhusavee, Rumbha	PD
† 28.	Bierny, Jean-Paul H.	R
29.	Bos, Louis Henry	FP
30.	Bower, William Herman	P
31.	Brewer, William Albert	GS
32.	Briggs, Robert Cornelius	IM
33.	Brooks, Robert Autry	PATH
34.	Brucker, Edward A.	PATH
35.	Buckmaster, Frances H.	FP
36.	Buffmire, Donald King	IM
37.	Burnes, Edward Aloysius	IM
† 38.	Byrne-Quinn, Edward	IM
‡ 39.	Byrne, John Patrick	IM
‡ 40.	Calhoun, Lois E. Friedl	PD
41.	Calkins, James Phillip	OPH
† 42.	Callie, Albert Samuel	PD
43.	Carland, III, James Frank	PD
44.	Carrell, Jr., William Dayton	IM
45.	Carriker, Frederick R.	OPH
† 46.	Carriker, Mary K. Ryan	OPH
47.	Carrion, Carlos Alfredo	NS
48.	Case, Paul Henry	OPH
49.	Casebeer, John Charles	OPH
50.	Caskey, John H.	FP
51.	Causey, Paul Spencer	ANES
† 52.	Chernov, Merrill Saul	GS
53.	Chrisholm, Jr., Walter Scott	PD
54.	Clemenger, Allan Keith	OBG
55.	Clothier, Barry Alan	FP
56.	Cloud, Jr., Daniel Tuttle	PD
57.	Clymer, John T.	P
58.	Cogland, John Lee	IM
59.	Cohen, Melvin L.	PD
60.	Cohen, Samuel Lewis	R
61.	Cohn, Lee Stern	P
62.	Collins, Richard Leo	ORS
63.	Collins, Jr., William Arthur	U
64.	Cooper, Edward Joel	IM
65.	Cornell, William Powell	GS-TS
66.	Costin, Max	OBG
† 67.	Coy, John Ross	R
68.	Crawford, Robert Fielding	PD
69.	Crawford, Thomas Irving	ANES
70.	Crisp, William E.	OBG
71.	Cummings, Robert H.	U
72.	Currin, John Francis	IM
73.	Curtin, John William	FP
74.	Cutcher, Solomon	FP
75.	Cutts, Robert Irving	P
76.	Daniels, Jr., Albert O.	PATH
77.	Davis, Charles Eugene	OBG
78.	Davis, Donald Andrew	GS
79.	Davis, William Claude	A
† 80.	Davis, William Maslin	GS
81.	DeArmond, Murray Moffett	P
† 82.	DeSando, Jr., C. James	IM
83.	Dew, Philip Ellsworth	PD
‡ 84.	Dewey, Louis Scotford	OM
† 85.	Dodd, Jack Levern	P
‡ 86.	Dorf, Arthur	DIA
87.	Dorman, George William	PDS
88.	Dowling, William Joseph	FP
89.	Dozer, William Ellis	IM
‡ 90.	Duarte, Aurelio	IM
91.	Dubin, Albert Andrew	IM
92.	Dubnow, Morton Howard	IM
93.	Duffey, Paul Homer	IM
† 94.	Duffy, John Charles	CHP
95.	Duisberg, Richard E. H.	P
‡ 96.	Dunlap, Lawrence Bruce	ER
97.	Ebalo, Marcial Miraflor	R
98.	Edwards, Thomas A.	IM
99.	Edwards, Jr., Walter V.	OM
100.	Ehrlich, Lee	CD
101.	Ehrmann, Norbert A.	FP
†102.	Enciso, Jr., Vicente O.	OBG
103.	Epstein, Jay Alan	OBG
‡104.	Fauver, III, George Firna	OBG
105.	Fillmore, Angus James	IM
†106.	Flannery, John Charles	P
107.	Flynn, Richard O.	FP
108.	Flynn, Jr., Stephen Eugene	GS
109.	Fosdick, William McGuffey	IM
110.	Fraser, George	OBG
111.	Friedman, Glenn Martin	PD
112.	Fulginiti, Vincent A.	PD
‡113.	Galindez, Maria M.	P
‡114.	Galindez, Orlando F.	P
115.	Ganem, John F.	FP
116.	Garcia, Hector Lawrence	IM
†117.	Garuecio, Peter A.	ANES
‡118.	Gere, III, James Brewster	PATH
119.	Gerster, Carolyn F. Taylor	IM
120.	Gerster, Josef Jacob	CD
121.	Geyser, Michael Robert	R
122.	Gilbert, David Bruce	FP
123.	Gindhart, Floyd Dare	OBG
124.	Ginn, Jr., James Allen	FP
125.	Glow, David Edmond	FP
126.	Goldberg, Arthur Stewart	PD
127.	Goldsmith, Melvyn Lowell	ORS
†128.	Goldstein, Marvin Ray	CD
129.	Goodin, William Leland	IM
†130.	Goodsite, Ronald Alan	PD
131.	Gordon, Alan Leslie	IM
†132.	Gorman, George Newell	OTO
133.	Green, Monroe Henry	CD
‡134.	Green, Wesley Edward	IM
135.	Groschupf, Richard P.	FP
†136.	Habra, Farouk Antoine	ORS
137.	Haines, Ronald Stewart	ORS
†138.	Hale, Garron Ronald	OBG
139.	Hale, Jr., Harry William	GS
140.	Halpern, Melvin M.	CD
141.	Harris, Benjamin Keith	RHU
142.	Hartley, Thomas F.	A
143.	Heap, Elmer L.	FP
†144.	Heine, M. Wayne	OBG
145.	Heller, Christopher Jonas	GS
146.	Heywood, Richard Neil	FP
†147.	Hicks, T. J.	FP
148.	Hileman, Walter T.	R
149.	Hill, Donald Frederick	IM
150.	Hilts, Schuyler Van Dusen	IM
151.	Hirsch, Louis	PATH
152.	Hoffmann, George L	GS
153.	Hoffmann, George Treymann	NS
154.	Holbrook, John P.	IM
155.	Hollander, Arnold Israel	IM
156.	Honsik, Frank Jandus	FP
‡157.	Hoshiwara, Isao	OPH
158.	Huber, Roderick Stephen	IM
159.	Inscore, Ray P.	FP
160.	Jallo, Jr., Stanley F.	ANES
161.	Janssen, Gerriet Arthur	OBG
†162.	Johnson, Charles Loren	GS
163.	Johnson, Ronald Glen	FP
164.	Jones, Richard Loren	FP
165.	Kahle, John Frank	FP
166.	Kahn, Arnold	R
‡167.	Kahn, Marcel T.	IM
168.	Kalil, Charles	FP
‡169.	Kanshepolsky, Jose	NS
†170.	Kanter, Richard Steven	OPH
171.	Keefrey, John Richard	PD
172.	Keely, Jr., Thomas	R
173.	Keller, Robert Stephen	FP
174.	Kelley, John James	NS
†175.	Kettel, Louis John	IM
‡176.	Kleitsch, William P.	GS

177. Kober, Leslie Rest — IM
178. Kohl, Jr., Harold Willis — IM
179. Kravetz, Robert Elliot — GE
180. Kron, Lester E. — FP
†181. Kwee, Tien Boh — IM
182. Lastnick, George — FP
183. Lawrence, Howard C. — PS
‡184. Leach, Rice Cowan — IM
‡185. Lepperd, Jr., Floyd C. — ADM-FP
186. Levenson, Alan Ira — P
187. Lewis, Donald Burns — U
188. Linkner, Laurence M. — PD
189. Longfellow, Don Woodward — OPH
190. Lorenzen, Robert Frederick — OPH
191. Louis, Herbert Johnson — ORS
192. Lovett, Vernor Floyd — GS
193. Lull, Jr., George Fairless — R
194. MacMillan, Richard Karl — IM
195. Macias, Lambert Cabrera — OPH
†196. Madere, Sherman Gabriel — OPH
197. Mallow, Harvey G. E. — FP
198. Mann, Frank Daniels — PATH
199. Mann, Larry Ian — ORS
†200. Mansour, Jr., Nick Jahjah — IM
201. Maresca, Robert Lewis — OTO
202. Marlowe, William Henry — GS
203. Marzouk, Baroukh Joussef — GE
204. Mason, Robert P. — R
205. Matthiesen, Don Edwin (deceased) — R
‡206. McBride, Draffan L. — PD
†207. McCorkle, Jr., Charles E. — TS
†208. McCready, Joseph Lee — OPH
209. McDivitt, Marcus D. — IM
210. McFarland, Jack Omar — GS
211. McGahey, William Buckles — FP
212. McGee, Jr., William E. — FP
213. McKinley, Jr., William W. — ANES
214. Meredith, Daniel Thomas — GS
215. Merring, Leroy Lawrence — FP
216. Metcalf, Boyd H. — GS
217. Miles, Donald Ray — OPH
218. Mills, Charles Selby — IM

219. Minas, Thomas Folk — OPH
‡220. Mirza, Ahmed Hussain — IM
‡221. Mitchell, John R. — R
222. Mitchell, John Richard — IM
223. Moon, John William — FP
224. Moraca, Patrick P. — ANES
225. Nash, George William — NS
‡226. Nelson, Alfred Sidney — IM
227. Nelson, Arthur R. — TS
†228. Nelson, Donald Robert — OBG
229. Neubauer, Darwin William — GS
‡230. Neumaier, Arthur — IM
231. Newman, Alex — R
232. Nordmo, Stanley Haldor — PATH
233. O'Neil, James T. — FP
‡234. Olea, Edgardo Gracia — GS
‡235. Olea, Franeisco Graeia — GS
236. Ortiz, Augusto — FP
†237. Pallin, Irving Manuel — ANES
†238. Palmer, Alice Eugenia — D
239. Parsons, James Lewis — IM
240. Peabody, George Alvin — P
241. Pent, David — OBG
242. Perrin, William Dudley — ADM
243. Peterson, Robert Warren — OTO
244. Plainer, Truman Dean — OPH
245. Podolsky, Abe Israel — PD
246. Potter, Daniel John — IM
247. Potthoff, Herbert Benjamin — FP
248. Present, Arthur J. — R
249. Prickett, Mahlon D. — ANES
250. Ragsdale, Jr., William Egbert — D
‡251. Ramenofsky, Max Lantin — GS
‡252. Rappole, Bert W. — GS
253. Reuss, Henry — OBG
†254. Reznick, Richard Howard — PD
255. Rice, Theodore A. — OPH
256. Richardson, Mary E. — PATH
257. Riordan, James J. — R
258. Ritter, Edward Louis — FP
‡259. Roberts-Mann, Helen Maria — D
260. Robey, William Bradford — FP
261. Robles, Neopito de Leon — GS
262. Ross, Eugene Marvin — IM
263. Roth, Edward — FP
†264. Roth, Melvin Isidore — FP
265. Ruben, J. Eugene — ANES
†266. Sabbagh, Adib Habib — TS
267. Samuels, Jules George J. — GS
‡268. Sanowski, Robert A. — GE
‡269. Sansone, Samuel — TS
270. Schabarum, Bruno Karl — CD
271. Schaller, Donald F. — FP
†272. Scheiber, Stephen C. — P
273. Schneider, Stanley H. — IM
274. Schoen, Roland F. — FP
275. Schreiber, Michael Martin — D
276. Schwartzberg, Gerald Fred — IM
277. Scott, William Coryell — OBG
278. Seagle, Joseph B. — PD
279. Serbin, Arnold Leon — IM
280. Shallenberger, Frank A. — FP
281. Shepard, William Lindsay — IM
282. Shepard, William Robert — FP
283. Silverman, Jay Irwin — IM
284. Simons, Jr., Bernard W. — GS
285. Sklar, Isidore Allen — P
286. Smith, Jay Wesley — IM
287. Smith, Maynard Saville — OBG

†288. Smith, Robert Briscoe — FP
289. Sommerville, Janet Worrell — IM
290. Sommerville, Robert Lee — GE
291. Spendlove, George A. — PM
292. Spitalny, Lawrence Allan — OPH
293. Spriggs, John Thomas — IM
294. Steen, William Brooks — IM
‡295. Stein, Hans F. — PUD
‡296. Steiner, Nicholas M. — IM
297. Stejskal, Robert Eugene — R
298. Stephens, Jr., Charles A. L. — IM
299. Stern, Morris Edward — ANES
‡300. Stimmell, Frederic Neil — OBG
†301. Strong, Joseph Steven — IM
302. Stuart, Jr., Ted James — GS
303. Swyers, Elsa Mae — OPH
304. Taggart, Charles Harper — TR
305. Targovnik, Selma E. Kaplan — D
306. Taylor, Ashton Bayard — GE
307. Tedford, John Howe — OPH
308. Templeton, Floyd Luther — P
309. Thompson, Harry Howard — IM
310. Thompson, Hugh Currie — PD
311. Titche, Leon L. — OTO
312. Tollackson, Kenneth Alan — PDA
313. Tompkins, Charles A. — PD
314. Trump, David Schick — PD
315. Tuchler, Maier I. — P
316. Twichell, Gilbert A. — OTO
317. Tyler, G. Scott — N
318. Van Epps, Charles Evart — OBG
319. Vernetti, Lucy Aida — FP
†320. Vogel, Edward Harold — OBG
321. Voldeng, Karl E. — FP
322. Volk, Philip Dale — FP
†323. Waldie, Robert Hambli — OPH
†324. Walske, Benedict R. — TS
†325. Washing, Robert Allen — ANES
326. Webb, Dale Fleming — TS
327. Weiland, Dennis Edward — GS
‡328. Weingart, David John — PATH
329. Wertz, Max L. — OTO
‡330. Westley, Charles Ross — PD

331. Whaley, Joseph Sexter	FP
332. Whitney, Peter Julius	GS
333. Windrow, Philip Donald	OBG
334. Winn, Wayne F.	P
335. Wisner, Harry Kern	PS
336. Withers, Martin S.	PD
337. Womack, Jr., William Raymond	FP
‡338. Wuebker, Margherita G.	IM
339. Yadon, Lowell Gene	ORS
340. Zee, Maurice L.	PD
†341. Zeitzer, Leon David	OTO
342. Zeluff, Reginald J. M.	ANES
343. Ziehm, Donald James	OBG
344. Zinn, Sheldon	OPH
345. Zuber, Sidney H.	PATH
*1. Goldfarb, Robert Paul	NS
*2. Mills, Robert D.	ORS
*3. Smith, Preston Foster	PUD

348 physicians have received their 1972 Certificate in Continuing Medical Education as of February, 1973.

261 members have received their 1972 Certificate in Continuing Medical Education as of February, 1973.

45 members now who were not members when the applications were sent out in October, 1971 have received their 1972 Certificate in Continuing Medieal Education as of February, 1973.

42 nonmembers have received their 1972 Certificate in Continuing Medical Education as of February, 1973.

It was moved and carried that in accordance with Resolution 2-71, Continuing Medical Education requirements adopted May 1, 1971, the Medical Education Committee report to the Board of Directors names of those members who have submitted acceptable reports of Continuing Medical Education activities, recipients of the 1972 Certificate in Continuing Medical Education.

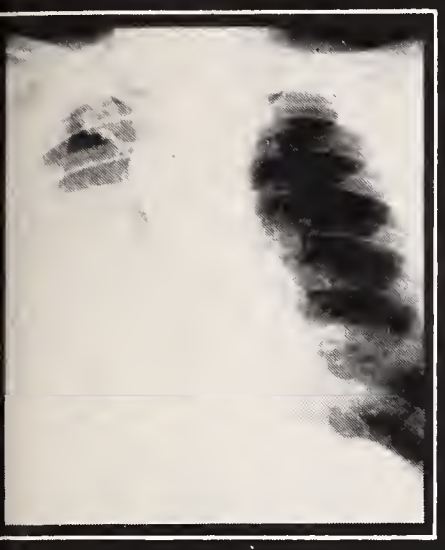
ARIZONA REGIONAL MEDICAL PROGRAM

Dr. Melick informed the Committee that it appears that the Regional Medical Programs will be phased out of existence by July 1, 1973. Discussion ensued as to the importance of continuing the programs developed by the Arizona Regional Medical Program with special interest in the CESA Project. It was determined that the Chairman would request an audience with Dr. DuVal, University of Arizona Vice-President, Health Sciences, with other members of the Committee to discuss the continuation of the medical education projects currently with the Arizona Regional Medical Program.

Meeting adjourned 8:47 p.m.

Edward Sattenspiel, M.D.
Secretary

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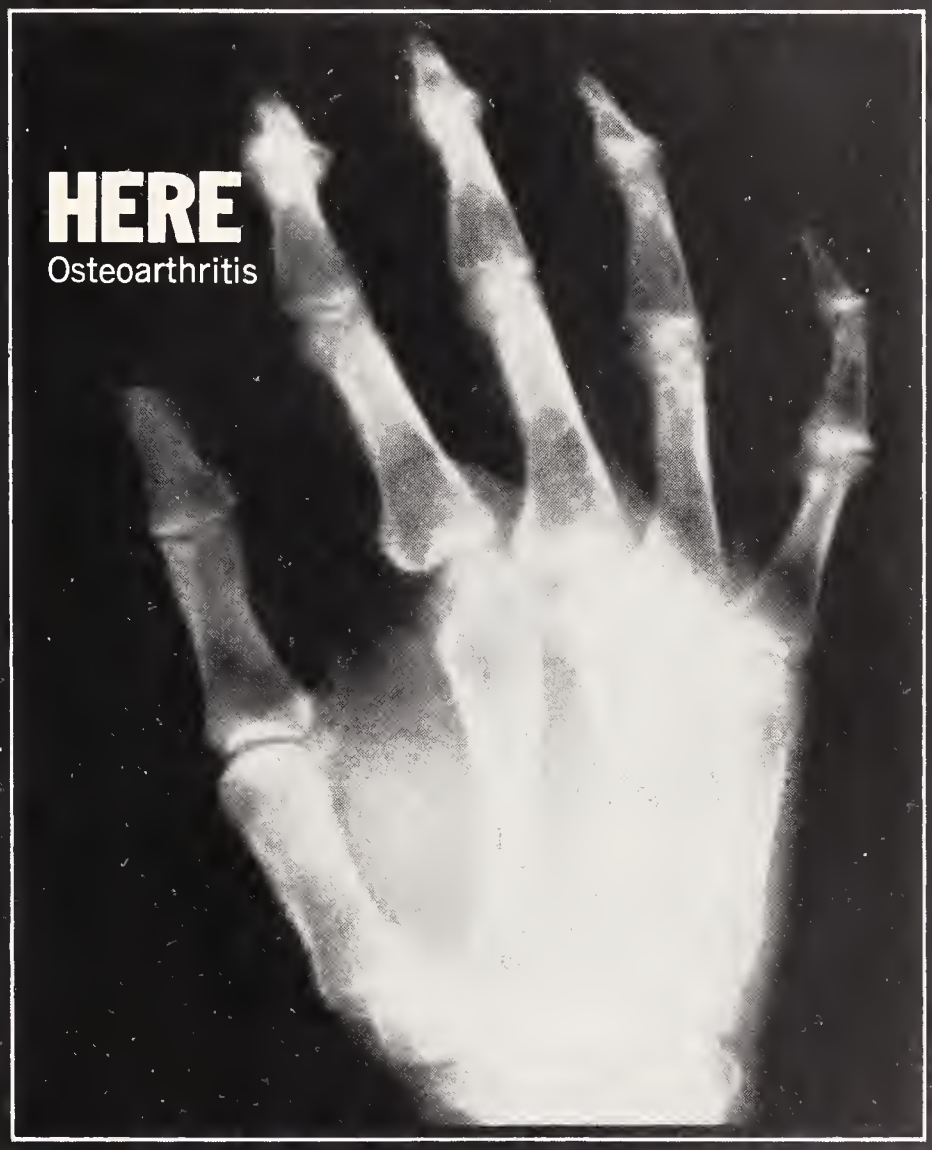
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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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HUMAN DIET AND CARDIOVASCULAR DISEASE

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CONTACT:
D. W. Melick, M.D.
5725 E. Fifth
Tucson, AZ 85711

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May 26, 1973
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CONTACT:
Ray Schneider
P.O. Box 6067
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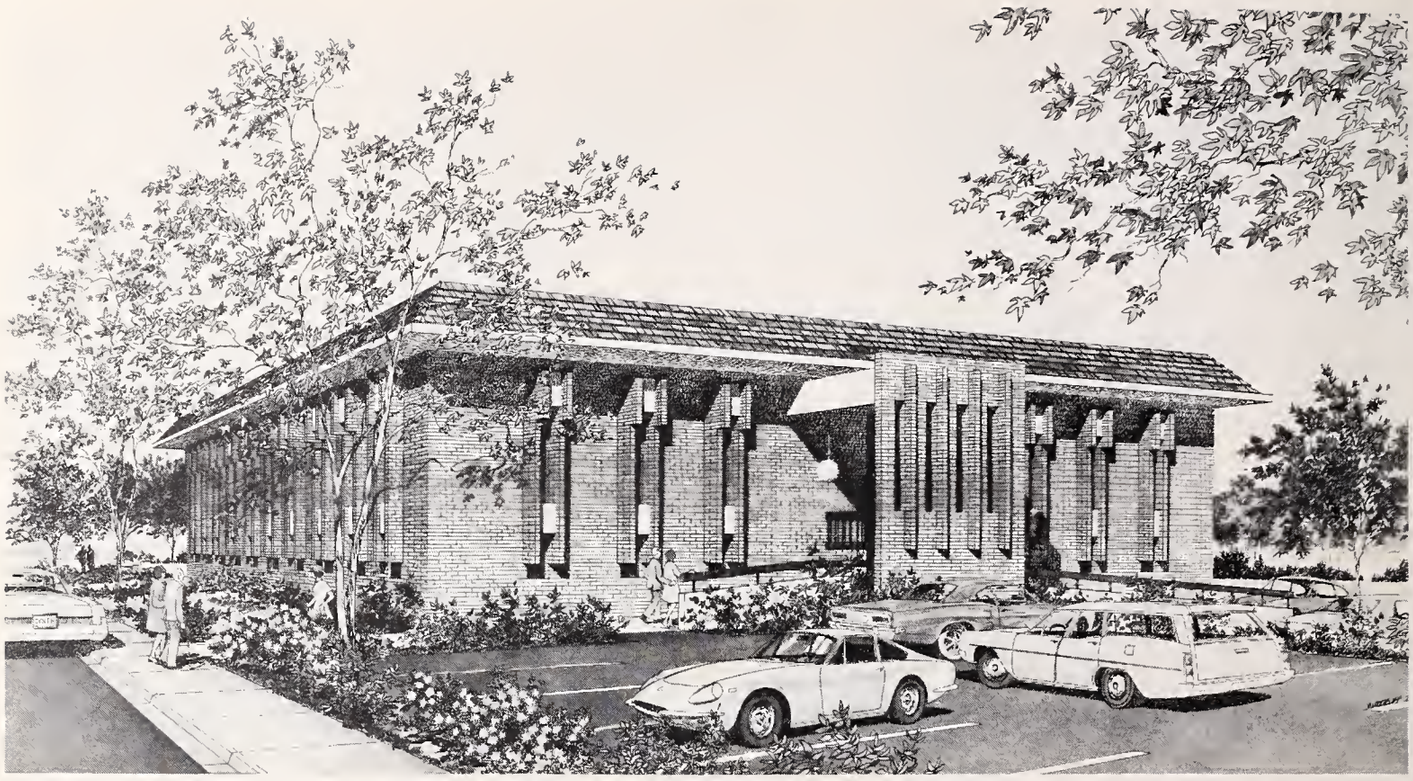
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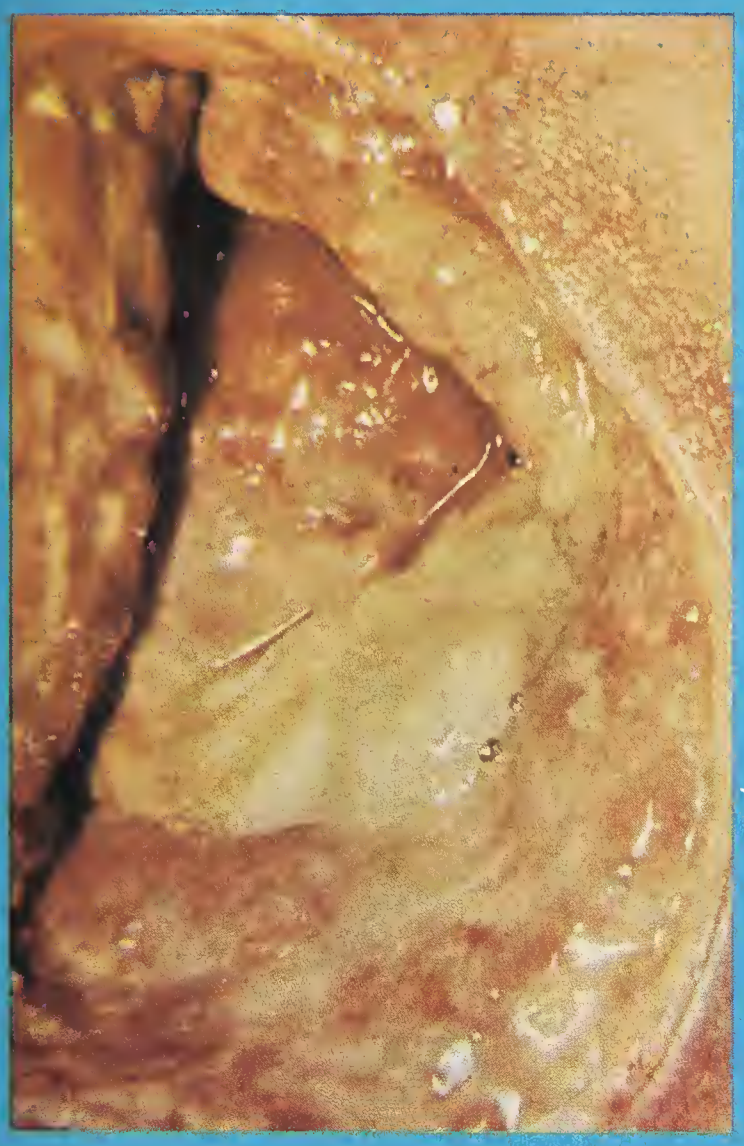
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Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.



After six days of TRAVASE therapy, debridement is nearly complete and granulation evident.

djunctive Therapy—Observe Its Effects in 48 hours
/hen the recommended nursing technique is llowed without deviation, this procedure can enerate visible improvement within 48 hours of eatment. If no dissolution of slough occurs by then, rther application is unlikely to be rewarding echeck for break in procedure, usually due to use cleansing or antiseptic agents which impair the ffectiveness of the enzyme in TRAVASE).

inical observation and photos by Kathleen Brough dham, M.D., Marion County Home, Indianapolis, Ind.

ease see next page for prescribing information

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Travase® Ointment brand of Sutilains

APPLICATION TECHNIQUE: TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement. It dissolves and facilitates the removal of necrotic tissues and purulent exudates.

TRAVASE enzymes are selective. Virtually inactive on viable tissue.

When this recommended nursing technique is followed without deviation, this procedure can generate visible improvement within 48 hours . . .



(Ulcer being irrigated) Thoroughly cleanse and irrigate the wound area using only sterile water or sodium chloride solution. Be sure to cleanse the wound of any antiseptics or heavy-metal antibacterial agents which may interfere with the enzyme activity.



Thoroughly soak the wound area. Where practical, tubbing or showering is suitable. Or wet soaks with gauze pads may be used. Remember to avoid chemical cleansing agents which may interfere with the therapy.



With a sterile cotton swab or finger cot, apply a very **thin** layer of TRAVASE Ointment. The ointment spreads easily and only a small amount is needed (a small dab of ointment will cover an area as big as the back of a hand).

Be sure, though, to rub the ointment well into every crack or crevice of the wound and overlap the surrounding skin one-fourth to one-half inch beyond the area to be debrided—to be sure of complete coverage.



Apply loose, wet dressings, thoroughly soaked in sodium chloride solution or sterile water to the area to be debrided only.



Cover the moist dressings with an occlusive wrap (Saran wrap, Telfa Pads, or other plastic wrappings) to keep wound site moist. Do not extend occlusive wrap over ½ inch beyond area to be debrided.



When changing dressing, gently wipe away the dissolved material. Repeat the complete dressing procedure, including application of TRAVASE Ointment, four times daily.

The ulcer shown in these photos is simulated on a model in order to demonstrate the correct TRAVASE application technique.

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_____ Additional Information on TRAVASE® Ointment (brand of Sutilains)

_____ In-service training program

_____ Comment _____

DESCRIPTION: TRAVASE® (brand of sutilains) Ointment is a sterile preparation of proteolytic enzymes, elaborated by **Bacillus subtilis**, in a hydrophobic ointment base consisting of 95% white petrolatum and 5% polyethylene. One gram of ointment contains approximately 82,000 casein units* of proteolytic activity.

ACTION: TRAVASE Ointment selectively digests necrotic soft tissues by proteolytic action. It dissolves and facilitates the removal of necrotic tissues and purulent exudates that otherwise impair formation of granulation tissue and delay wound healing (4).

At body temperatures these proteolytic enzymes have optimal activity in the pH range from 6.0 to 6.8.

INDICATIONS: For wound debridement (1,2)—TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

Second and third degree burns,
Decubitus ulcers,
Incisional, traumatic, and pyogenic wounds,
Ulcers secondary to peripheral vascular disease.

CONTRAINDICATIONS: Application of TRAVASE (brand of sutilains) Ointment is contraindicated in the following conditions:

Wounds communicating with major body cavities,

Wounds containing exposed major nerves or nervous tissue,

Fungating neoplastic ulcers,

Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus

WARNING: Do not permit TRAVASE Ointment to come into contact with the eyes. In treatment of burns or lesions about the head or neck, should the ointment inadvertently come into contact with the eyes, the eyes shou be immediately rinsed with copious amounts of water, preferably sterile.

PRECAUTIONS: A moist environment is essential to optimal activity of thi enzyme. Enzyme activity may also be impaired by certain agents. In vitro several detergents and antiseptics (benzalkonium chloride, hexachlorophene, iodine, and nitrofurazone) may render the substrate indifferent to the action of the enzyme (3). Compounds such as thimerosa containing metallic ions interfere directly with enzyme activity to a slight degree, whereas neomycin, sulfamylon-streptomycin, and penicillin do not affect enzyme activity. In cases where adjunctive topical therapy has been used and no dissolution of slough occurs after treatment with TRAVASE Ointment for 24 to 48 hours, further application, because of interference by the adjunctive agents, is unlikely to be rewarding.

In cases where there is existent or threatening invasive infection, appropriate systemic antibiotic therapy should be instituted concurrently.

Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

ADVERSE REACTIONS: Adverse reactions consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred

If bleeding or dermatitis occurs as a result of the application of TRAVAS (brand of sutilains) Ointment, therapy should be discontinued. No system toxicity has been observed as a result of the topical application of TRAVASE Ointment.

Dosage and Administration

STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTI RESULTS OF TREATMENT

1. Thoroughly Cleanse and Irrigate Wound Area with sodium chlori or water solutions. Wound **MUST** be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., Hexachlorophene, Silver Nitrate, Benzalkonium Chloride, Nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showeri or wet soaks (e.g., sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate conta with necrotic tissue and complete wound coverage extending to ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

How Supplied

3P3002 TRAVASE Ointment is supplied sterile in one-half ounce tubes (14.2 g.) containing 82,000 casein units of sutilains per gram o hydrophobic ointment base.

The ointment must be stored under refrigeration at 2° to 10° C (35° to 50° F).

References

1. Garrett, T. A. **Bacillus subtilis** protease, a new agent for debridement. Clin. Med. **76:** 11-15, 1969.

2. Hesterberg, R. (Necrosis treatment on fermentative basis). Doctoral dissertation from the Chirurgical Clinic of the University of Munich. Dissertation Printing: Charlotte Schoen, Munich, 1964. (Ger.)

3. Howes, E. L. The healing of the burn may be hindered by its first aid therapy. 20th Cong. Soc. Inter. Chir., Rome, Italy, September 14-23, 1963

4. Prytz, B., Connell, J. F., Jr., and Rousselot, L. M. **Bacillus subtilis** protease in the digestion of burn eschar. Clin. Pharmacol. Therap. **7:** 347-51, 1966.

*A casein unit is the amount of enzyme required to produce the same optical density at 275 mμ as that of a solution of 1.5 mcg. tyrosine/ml. after the enzyme has been incubated with 35 mg. of casein at 37° C fo one minute.

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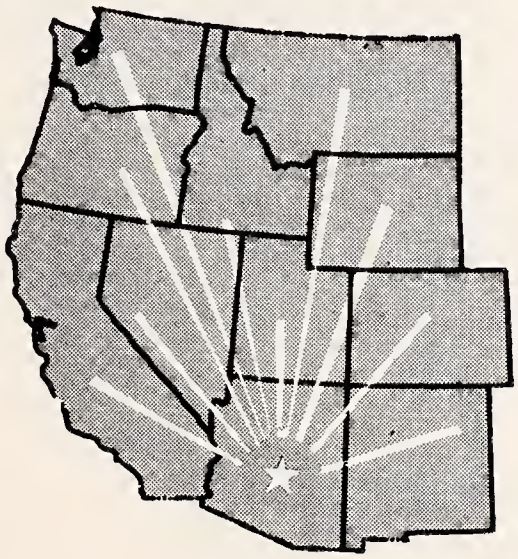


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Medical Director



Carl T. Kirchmaier, M.D.
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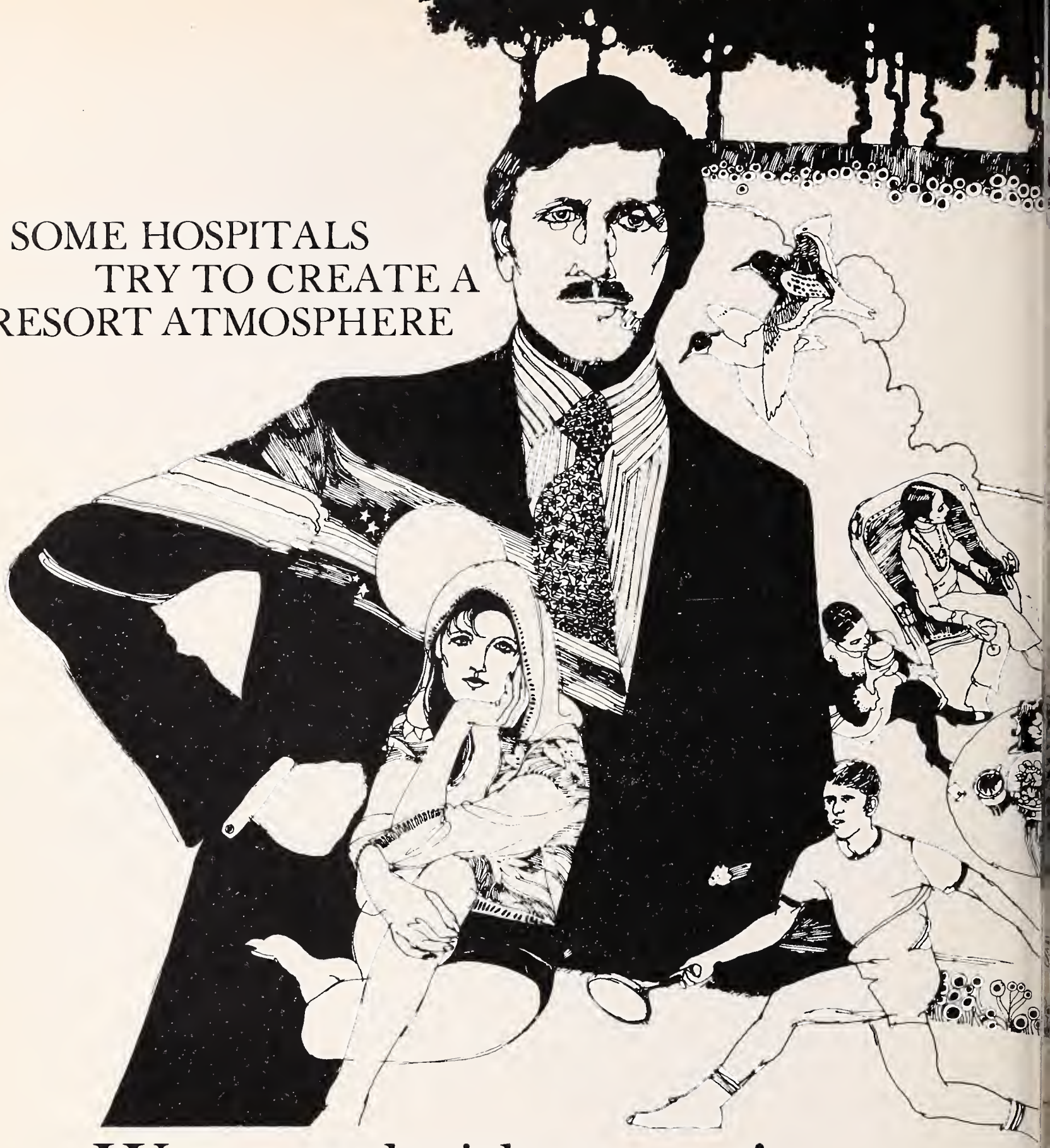


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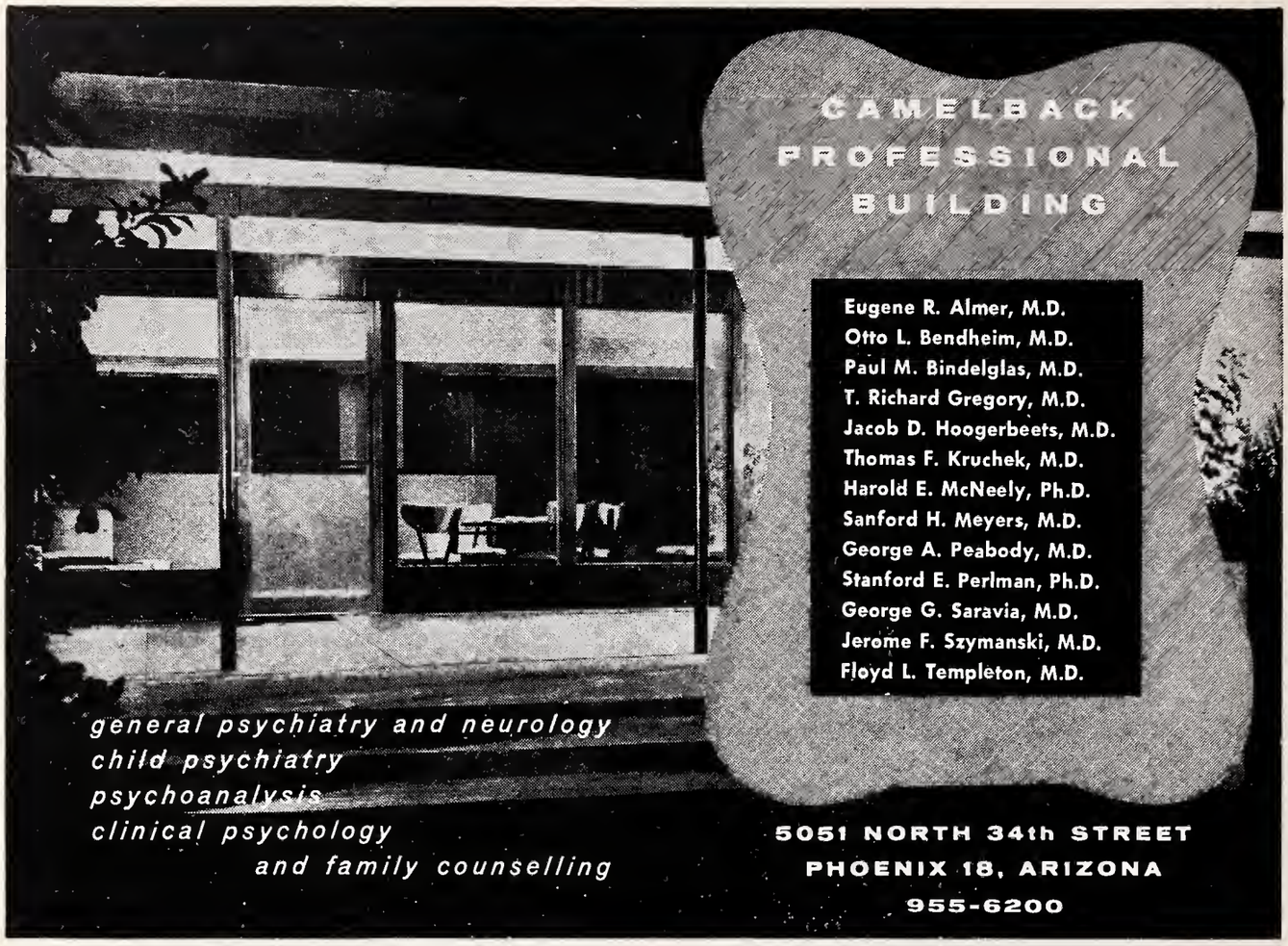
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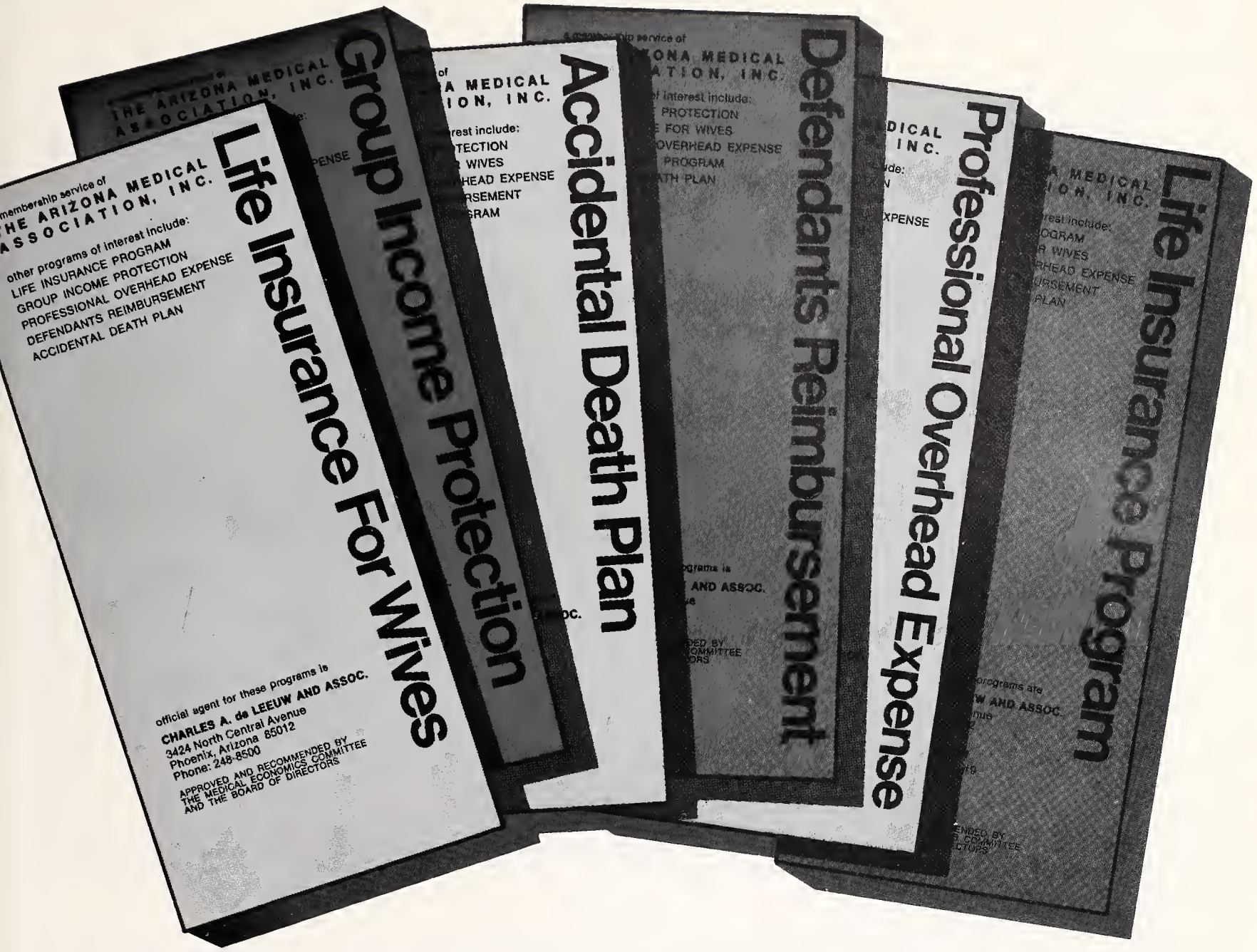
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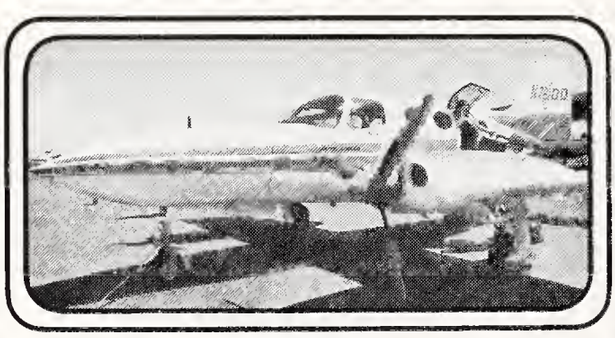
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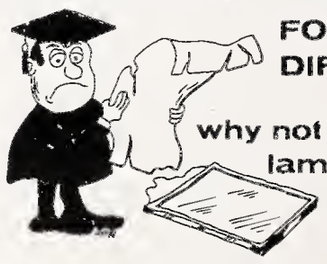


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Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychologic dependence have not been reported on recommended doses, use caution in administering to addiction-prone individu or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effec Employ usual precautions in patients who are severely depressed, or with

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JUNE, 1973/Vol. 30, No. 6

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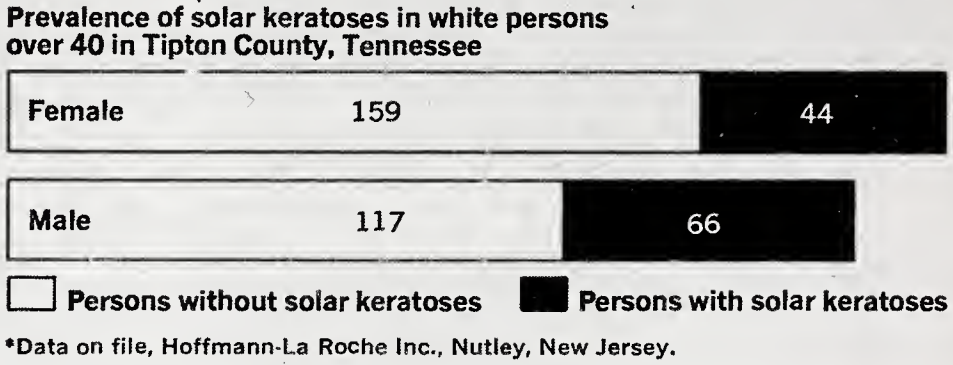
What it means to live and work in Tipton County, Tennessee

Persons who are white and over 40 have one chance in four of having solar keratoses... which may be premalignant

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

Prevalence of solar keratoses in white persons over 40 in Tipton County, Tennessee



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

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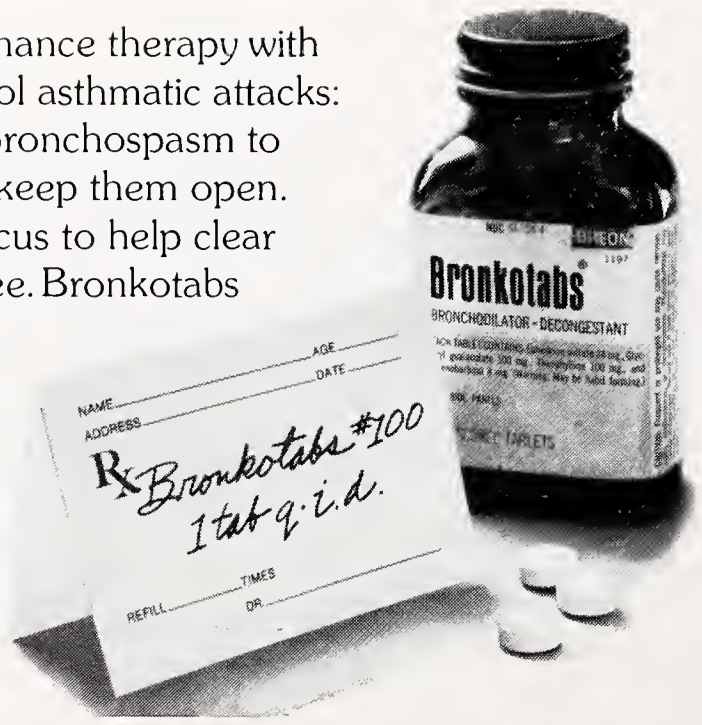
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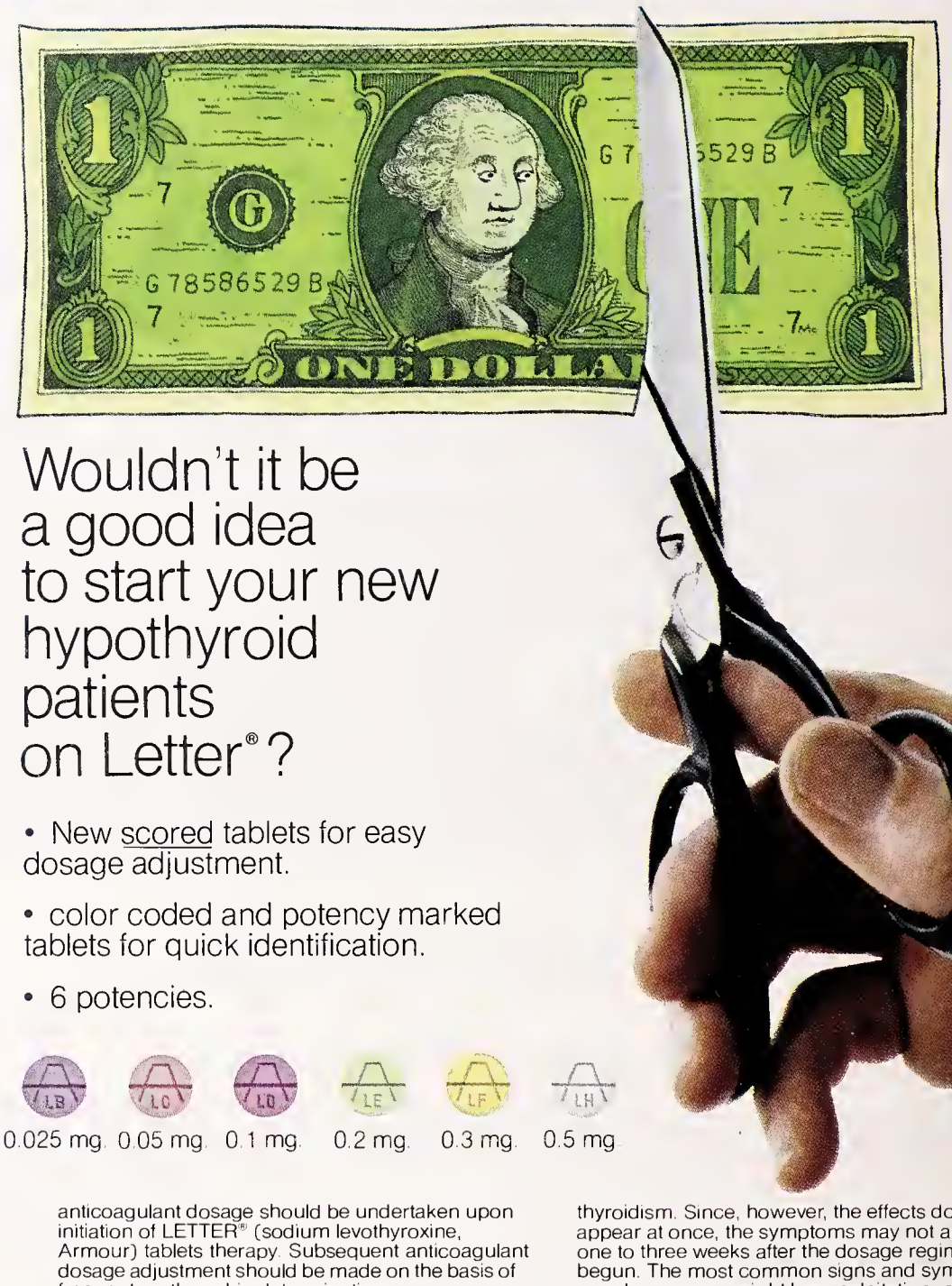
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President
American Pharmaceutical Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical Manufacturers Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to their patients...

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist, made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree, puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 25

Advertisement

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ice...
"Medical societies ought to con-
continuing campaigns to point
ıe substantial savings that could
alized thru deductible insurance
rotection for catastrophic ill-
At the very least, they should, in
atients' interest, question the
s of any insurance organization
aises health care costs by forc-
olicyholders to buy insurance
may not need or want and prob-
von't ever use.
"Too many doctors are indiffer-
the economic consequences of
decisions. Too many, for ex-
e, habitually hospitalize patients
e convenience of the MD. It's
ense to deny such habits exist...
"Doctors, thru their medical so-
s, have unhesitatingly appealed
ir patients for support in the
against government interference
he private practice of medicine.
he public in the past has re-
ded. It's time the American Med-
ssociation and state and local
cal societies paid off the debt by
ive action to hold down the cost
dical care."

of Drugs

Insurance rates and hospital
es are only two factors in health

drugs that he selects to treat the
rity of conditions encountered in
actice. Moreover, the physi-
s choice of a specific brand is
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articular manufacturer's
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Some substitution proponents
argued that the dispensing of a
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action between the pharmacist
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harmacist may avoid even a
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ing the patient that he is making
ubstitution. I would judge that
ourts would be sympathetic
d a pharmacist who substituted
ut physician approval and who
took a legal defense that seeks
ke the patient responsible for
harmacist's actions.

ced Prescription Prices?

Substitution advocates are
esting to the consumer, and par-
rly the consumer activist, that
ed prescription prices could
legalization of substitution.
ve seen absolutely no evidence
tify this claim. To the contrary,
ience in Alberta, Canada, where
itution is authorized, suggests

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists *are concerned*. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

In short, what the American Pharmaceutical Association advocates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

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P·M·A

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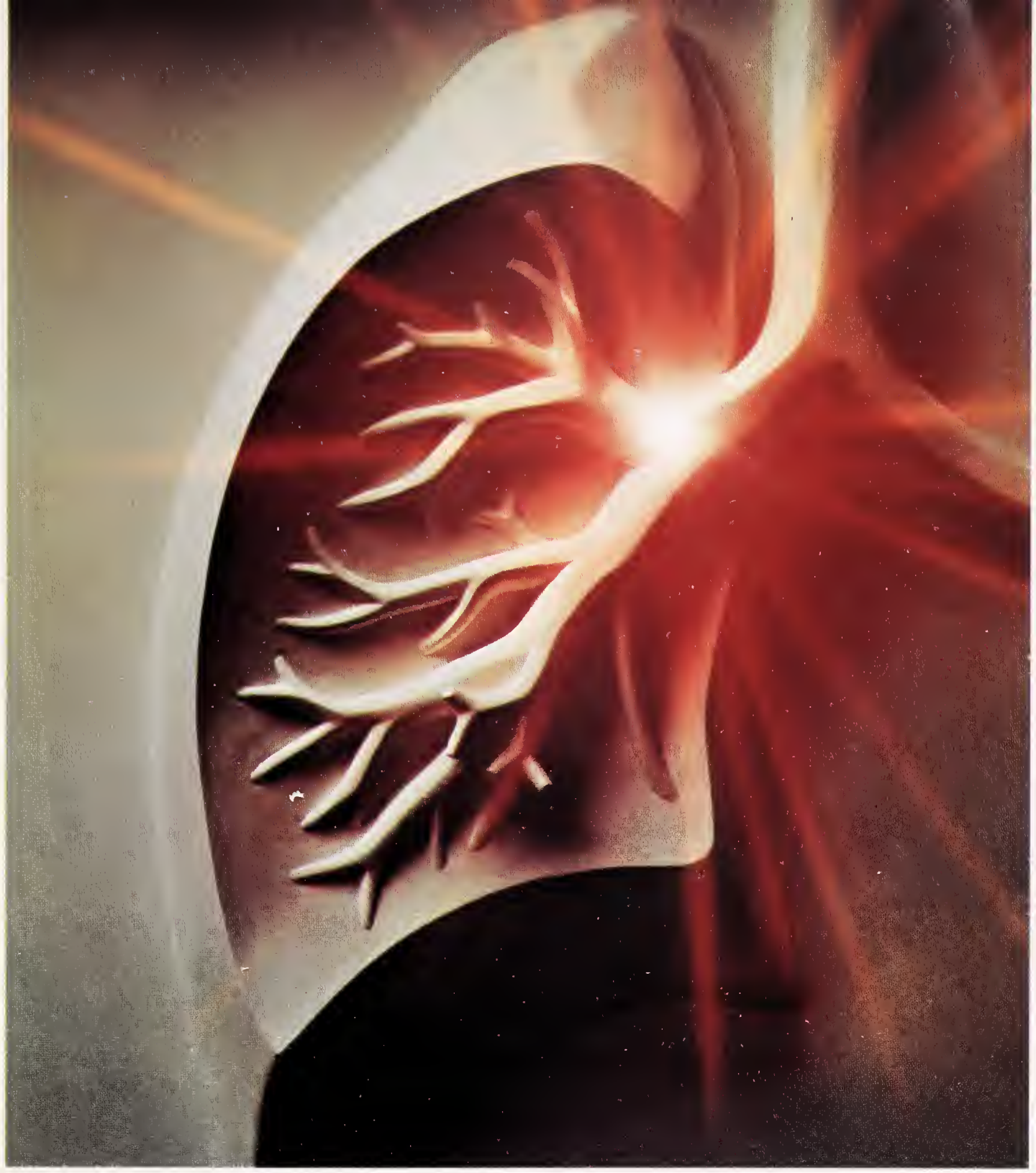
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Usage in pregnancy. (See above **WARNINGS** about use during tooth development.)
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PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.
In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.
Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.
In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).
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Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).
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Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.
Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.
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and the Latin **sedatus,**
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CHROMOSOME SCREENING OF NEWBORNS, A TECHNICAL AND FEASIBILITY STUDY

V. I. ROBICHAUX
J. R. DAVIS, M.D.
E. M. LAVOR

INTRODUCTION

In the past decade chromosome analysis has become available on a routine basis in the laboratory. The clinical study of chromosomes is usually directed toward high risk individuals of whom chromosome abnormality is either clinically or statistically suspected. Such individuals usually present with stigmata associated with chromosome aberations or are related directly to persons with known chromosome abnormalities. Chromosome aberrations are associated with such conditions as Down's syndrome, Cri-du-Chat syndrome, Turner's syndrome, Klinefelter's syndrome, chronic myelogenous leukemia, and other less common chromosonal imbalance syndromes.[1]

A complete chromosome analysis includes collection and culture of viable cellular material from the individual (usually lymphocytes in peripheral blood), arrest of the culture with a mitotic poison (colchicine or its derivatives), and hypotonic expansion to disperse the chromosomes. The chromosomes are stained and cellular complement assessed by counting 20 to 30 cells to arrive at the modal number.[2] Photographs of a suitable and representative chromosome spread are obtained and a karyogram prepared (see Figure 1).

The purpose of this study was to determine the cost feasibility of newborn chromosome screening on a routine basis and to determine the depth of analysis appropriate in such screen-

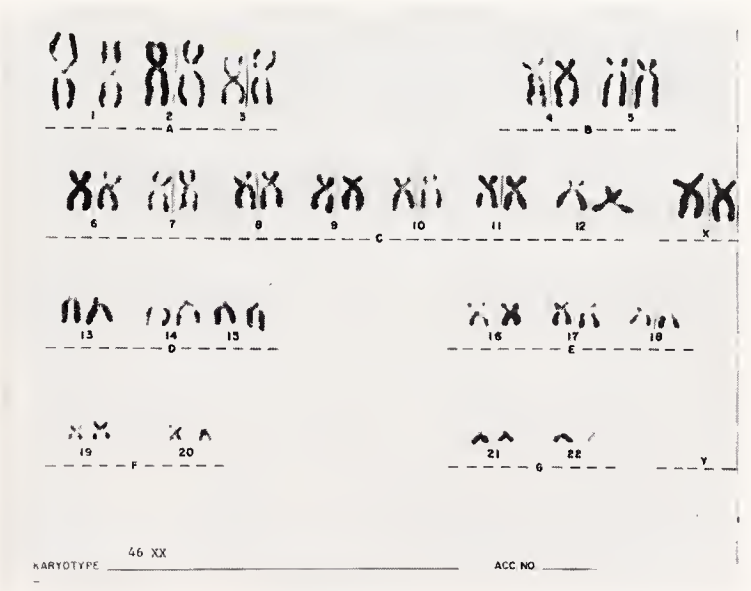


Figure 1
Karyogram from cord blood. 46, XX
Normal female karyotype.

From the Pre-Natal Gentics Counseling Laboratory, College of Medicine, U of A, Tucson. Sophomore Medical Student (V. I. Robichaux); Assoc. Professor Pathology (Dr. Davis); Technical Consultant, M.T., C.T. (A.S.C.P.) (E. M. Lavor). Grant Support PHS #5-S01 RR05675-03 National Foundation of March of Dimes.

ing. This study was undertaken during a summer fellowship awarded to the senior author sponsored under a Public Health Service General Research Support grant.

METHODS AND MATERIALS

Technical. Umbilical cord blood was obtained from 26 consecutive newborns at the Arizona Medical Center, Tucson, Arizona. In addition, heart blood was obtained at autopsy from a malformed infant that had died shortly after birth at another Tucson area hospital.

All of the cord blood samples were collected in sodium heparin Vacutainers and were stored at room temperature prior to inoculation of tissue culture tubes. Delay time from sample collection to culture inoculation varied from three hours post-collection to 27 hours. Most cultures were initiated between 12 and 24 hours post-collection.

Using sterile technique and glassware, a lymphocyte culture medium[3] was assembled, and 5 ml aliquots were dispensed into tissue culture tubes. These were then capped tightly and stored at −9°C until needed.

The blood samples were given a minimum of 1½ hours to settle out after the samples were delivered to the laboratory. Two of the cord blood samples were clotted as was the heart blood sample. Two cultures were set up on each blood sample. After inoculation with 0.5 ml leucocyte-rich plasma, the tubes were placed in a 37°C incubator, and most were allowed to incubate 72 hours. Samples from three of the infants were allowed to incubate for 48 hours to assess culture growth and yields at this shorter culture period. Following incubation, the cultures were arrested, usually with 0.25 ml (10 mcg/ml) colcemid (N-desacetyl-N-methylocolchicine) or 0.5 ml (10^{-5}M) colchicine in a few cases. The culture tubes were then returned to the incubator ,and after 1½ hours of exposure to the arresting agent, the cultures were harvested and slides prepared according to a protocol modified from S. Villafane.[3] Cells were centrifuged five minutes at 600 rpm, and slides were stained with a buffered giemsa stain at pH 9. In most cases four slides were prepared per culture tube or a total of eight slides per case. Twenty metaphase spreads were counted on each of the first 20 cases to determine modal number. For the last seven cases ten spreads were counted per case. On every fourth spread counted a modified eye karyotype[4] was performed. In this procedure the spread was evaluated for number of D and G series chromosomes, and all chromosomes were evaluated for gross morphological aberrations. Some subjective screening of spreads prior to selection for counting or eye karyotyping was necessary to prevent wasted time attempting to characterize or count broken or poor quality spreads. Finally, a spread not previously counted was selected, identified with an ink spot on an adjacent part of the coverslip and photographed. A technique of slide scanning similar to that used in differential WBC counts was used to insure that no cell was counted more than once. Twenty-one of the cases were photographed using the Zeiss Photomicroscope II with Polaroid attachment. Both Polaroid P/N 55 and 51 film were used. Six of the cases were photographed using Kodak Shellburst ASA 400 film in the Zeiss 35mm component. Karyograms were prepared on 23 of the cases.

Cost Analysis. This part of the study was divided into two parts. One, the cost of materials was computed on a per patient basis. No attempt was made to obtain the least expensive biologicals and materials available. Rather, materials that for the most part were already in use at this clinical laboratory were evaluated. Secondly, a time-motion study was made of the time necessary to complete the various tasks associated with karyotype analysis. Both the investigator and the clinical cytogeneticists were timed repeatedly in the performance of tasks involved with chromosome analysis. Average individual task times were summed to arrive at a figure representative of total time involvement per case.

RESULTS

Culture Growth. In every case at least one of the culture tubes set up on each case produced lymphocyte growth. The variables of post-collection delays prior to inoculation of cultures and arresting agents (colcemid vs. colchicine) appeared to have little effect on end results.

Surprisingly, good results were obtained from all three clotted samples. The failure of one tube in the study to produce growth was attributed to masive fungal contamination. There was evidence of light bacterial contamination in two cases. In neither case was the contamination extensive nor did it appear to adversely affect lymphocyte growth or yield of mitotic figures.

There was considerable variability in the growth and yield from case to case. However, growth and yield were considered to be satisfactory in all but two cases. These two yielded poor but usable material.

Incubation Time. Good results were obtained in all of the 48-hour cultures as well as in most of the 72-hour cultures. It may be that lymphocytes from newborns more readily undergo the blastoid reaction and mitotic division, and that cultures from newborns could routinely be incubated for 48 hours instead of the more prevalent 72-hour culture used in other laboratories.

Modal Counts. All the cases analyzed in the project were found to have normal 46 XX or XY karyotypes. In all cases the sex phenotype matched the sex genotype. Some effort was made to inject a high probability chromosome aberration into the study with the addition of the autopsy sample. No modal or gross morphological defects were noted in this case.

As noted before, 20 modal counts were performed on each of the first 20 cases. During the project a review of eight Arizona Medical Center clinical chromosome analysis cases in which abnormalities were discovered indicated that in every case the abnormality became evident during the initial ten eounts. These eight cases include three of trisomic mosaicism. In addition, a review of 24 abnormal cases analyzed by a private clinical laboratory in Tucson yielded similar results. For this reason ten modal counts were utilized on each of the last seven cases.

The average percentage of hypomodal cell spreads for all counts was 8.32%, and the range was 0 to 19% per case. The 19% hypomodal figure is high[5] and suggestive of possible mosaicism. However, in this particular case many broken chromosome spreads were observed and indicate that faulty slide preparation or overexpansion in the hypotonic solution was the more likely cause; 19% hypomodal is considered an artifact of preparation. The average percentage of hypermodal spreads was 0.8% and the range 0 to 4.8%.

Photography. Chromosome spreads were successfully photographed on both the 35 mm Kodak Shellburst and Polaroid films. Results with the different films can be compared in Figure 2. The 35 mm was generally preferable because of the higher contrast prints and larger field of view.

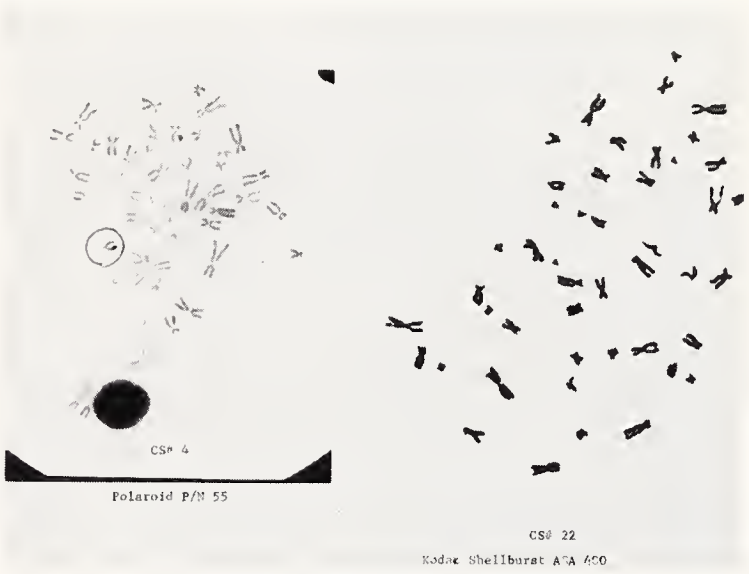


Figure 2
Comparison of photographic films: Polaroid and Shellburst 35 mm.

Costs of Material:

Without photographic karyogram:	$2.10
With Polaroid karyogram:	3.63
With 35 mm karyogram:	3.66

Total Time Involvement per Case:

(—Kgram, 10 modal counts):	160 minutes
(+Kgram, 20 modal counts):	280 minutes

A screening analysis is defined to consist of 10 modal counts, eye karyotypes, no photographs or karyograms, and no professional review.

A complete chromosome analysis is defined to consist of 20 modal counts, eye karyotypes, photographs, karyogram and professional review. The following cost comparisons can be made:

Cost per case	Screening Analysis	Complete Analysis
Biologicals & Materials	$ 2.10	$ 3.66
Technician Wage (Projected average hourly wage: $4.50)	11.97	21.00
Facility Overhead (2.5% of wages & materials)	0.35	0.75
Professional Review	0.00	6.00
Total	$14.42	$31.41

The prevailing cost of a complete chromosome analysis is about $75.00. However, this takes into account the fact that many commercial labs use more expensive chromosome culture kits instead

of assembling the media and materials themselves. Furthermore, the $75.00 fee reflects the cost of initial facility outlay and test program initiation, and usually makes allowance for no-charge repeat testing in cases of initial failure or suspect results. In addition, many laboratories photograph several spreads and prepare more than one karyogram on each case. The $75.00 fee may also cover the charge for ancillary tests (buccal smears) when applicable.

DISCUSSION

It is not surprising that no abnormal karyotypes were discovered in this limited study. In 1969 Sergovich *et al.*[6] reported a screening study of 2,159 consecutive newborns. Cultures were successful on 2,081 of these. Of the 2,081, only ten were discovered to possess chromosome abnormalities or 0.48% of the sample. Of the ten abnormals, at least four possessed sufficient physical stigmata of genetic disease to warrant clinical chromosome analysis. Thus, of the 2,081 infants, six would have normally remained undetected but for the screening process. Assuming that these six cases could have been detected with the screening analysis outlined earlier, and that the estimated cost per case is reasonably accurate, the following computations can be made.

$14.42 x 2,081 = $30,008.02 (Cost of all successful tests)

$30,008.02 ÷ 6 = $5,001.37 (Cost per abnormality detected)

If the incidence of chromosome aberrations observed in the Sergovich study approaches the incidence in the general population, the technical, non-professional cost of detecting clinically unsuspected genetic abnormalities at birth would be approximately $5,000.00 per abnormality. This is not an exorbitant figure for a screening procedure directed to a population at large.

Pima County Screening. Pima County issued 6,966 birth certificates during 1971.[7] Six thousand nine hundred sixty-six births/year translates to 134 births/week (with seasonal variation). If it takes a cytogeneticist 160 minutes to screen one case, then in one 40-hour work week, he could process approximately 15 cases. Therefore, nine full-time cytogeneticists would be required to cope with the Pima County case load. The weekly cost in wages, materials and overhead would be about $1,930 or $100,400 per year.

This and other studies[5, 6, 8] have demonstrated that routine chromosome screening of neonates is technically feasible. The economic feasibility of such screening is less certain. The screening analysis developed in this study would reduce the expense of such screening far below that which would be realized if complete chromosome analysis was utilized. However, the cost per abnormality detected still remains high. It should be mentioned that X and Y chromosome abnormalities can be detected with procedures other than chromosome analysis. These procedures are generally faster and less expensive than chromosome analysis.

The initial cost in facilities and the ongoing costs of the screening must be balanced against the relatively low incidence of chromosome abnormalities in the general population. This in turn must be considered in relation to the value of early genetic counseling that such a screening project would make possible.

SUMMARY

Chromosome screening was performed in 26 consecutive newborns and on one malformed infant at necropsy. A screening procedure was developed that is faster and less expensive than the type of chromosome analysis prevalent in clinical laboratories today. Analysis and projection of this screening project indicates that the technical cost of discovering abnormal chromosome complements in the general population on a routine basis would be approximately $5,000.00 per abnormal case. A projection of the requirements for screening all newborns in Pima County indicates that such an operation would cost in excess of $100,000.00 in yearly operating expenses exclusive of professional services and genetic counseling.

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Technical assistance was kindly and effectively given by J. Robichaux and T. Roed.

CARCINOID TUMOR OF THE ILEUM ASSOCIATED WITH ACUTE GASTRO INTESTINAL HEMORRHAGE

CHARLES W. WALDRON, M.D.

After a prolonged period of idiopathic iron deficiency anemia, a 22-year-old woman presented with an acute gastrointestinal hemorrage. Complete clinical and laboratory evaluation studies were unremarkable. Laparotomy revealed a deeply ulcerated carcinoid tumor of the terminal ileum. This case demonstrates the importance of considering carcinoid tumor as an etiology in acute gastrointestinal hemorrhage of inapparent origin.

Although a relatively uncommon medical problem, carcinoid tumor has always been of the greatest interest and challenge to clinicians. The neoplasm has been found to take origin in almost any tissue derived from the primitive entoderm as well as in teratomas. Arising from Argentaffin cells of enteric glands throughout the gastro-intestinal tract, this lesion is most commonly found in the appendix and distal ileum.[1] When metastatic to the liver and associated with the carcinoid syndrome, its presentation is usually classic. However, the non-metastatic isolated lesion in the intestinal submucosa almost invariably defies pre-operative recognition.[2] Within the small bowel it most commonly presents as abdominal pain of varying character often suggesting intermittent intestinal obstruction. Diarrhea, weight loss, fatigue, nausea and vomiting represent relatively common manifestations. Occult and intermittent gastro-intestinal bleeding associated with carcinoid tumor of the ileum has been reported frequently. Nevertheless, it occurs symptomatically in only 5% to 10% of individuals with small bowel carcinoid.[2, 3] Acute gastrointestinal hemorrhage, manifest either as hematemesis or frank rectal bleeding, occurs only rarely. The initial report in the literature was that of Mann and Simpson in 1957[4] who described a case of gastrointestinal hemorrhage associated with a carcinoid tumor of the proximal ileum. Isolated case reports have appeared since.[5, 6, 7] The purpose of the case to be reported is to once again focus attention on carcinoid tumor as an etiologic agent not only of the more commonly reported insidious enteric bleeding but also of acute severe gastrointestinal hemorrhage.

From the Tucson Clinic, Tucson, AZ.

CASE PRESENTATION

A 22-year-old white female, college student, was hospitalized on May 14, 1972 for evaluation of nausea, vomiting, and progressive weakness of 48 hours duration.

The patient had been well until April, 1970 when she was hospitalized for evaluation of a reported acute episode of nausea, vomiting, and bloody diarrhea. Complete gastrointestinal x-ray evaluation and sigmoidoscopy were said to have been normal. The hemogram demonstrated an iron deficiency type anemia. Oral iron supplements very promptly returned the hemoglobin and hematocrit values to normal. In February, 1972 she was rejected while attempting to donate blood. A hematocrit at that time was reported to be ~35%. Subsequent history review revealed that during the two-year interval the patient felt quite well except for some intermittent fatigue. On March 31, 1972 she was initially

seen as an outpatient presenting with no specific complaints. Complete physical evaluation was unremarkable except for evidence of a distinct skin pallor. Laboratory studies revealed a hemoglobin of 7.6 gm/100 ml. and a hematocrit of 27%. Red blood cell indices and serum iron studies again indicated an iron deficiency type anemia. Stool, gastrointestinal x-ray, and other pertinent evaluation studies were unremarkable. Oral iron therapy was instituted and follow-up hematologic studies on April 14, 1972 revealed a hemoglobin of 11.1 gm/100 ml. and hematocrit of 33% with a reticulocyte count of 6.4%. She was then maintained on oral iron therapy and remained asymptomatic while vigorously pursuing her college studies.

On May 13, 1972 the patient developed genralized abdominal discomfort associated with nausea, vomiting, and progressive weakness. There was no evidence of hematemesis and no bloody or melenotic stools. An outpatient hemogram revealed a hemoglobin of 8.9 gm/100 ml. and hematocrit of 27%. She was subsequently admitted to the hospital.

Medical history disclosed that the patient had no previous history to suggest gastrointestinal disease prior to April, 1970. She had always prided herself on excellent health and was known to have had a hemoglobin of at least 15 gm/100 ml. on several occasions prior to 1970. Benign renal glycosuria was documented in 1969 and was also noted to be present in two family members. Family history revealed no bleeding disorder. One older sister was reported to have had a "transient inflammatory gastrointestinal disorder" with the exact etiology undetermined. Menstrual periods were rather lengthy at 7 days with appreciable heavy flow the initial 3 to 4 days.

At the time of hospitalization on May 14, 1972 physical examination revealed an acutely ill 22 year old female who presented with striking pallor. Initial blood pressure was 95/50 with a pulse of 108 per minute. The skin was clear. No telangiectatic lesions were noted over the nasal or buccal mucosa. The abdomen was flat and soft with moderate discomfort to palpation in the epigastrium and peri-umbilical region. Bowel sounds were hyperactive. No abdominal visceromegaly was evident nor were there any masses palpated. Rectal examination showed the ampulla to be empty with no melena noted. Moderately large external hemorrhoids were present. Sigmoidoscopy to 25 cm. demonstrated a normal mucosal vascular pattern and no mass lesions.

The pertinent laboratory studies revealed a hemoglobin of 7.5 gm/100 ml.; hematocrit 22%; and white blood count of 19,800. White blood cell differential was unremarkable. Red cell morphology disclosed moderate polychromasia, anisocytosis, and poikilocytosis. Reticulocyte count was 9.6%. Urinalysis showed a 4+ sugar, moderate ketones, 1 to 3 white blood cells, and an occasional red blood cell per high powered field. All other urine studies were unremarkable. Coagulation profile including Ivy bleeding time, platelet count, activated partial thromboplastin time, and prothrombin time was normal. Serum iron, 15 mgs.%; total iron binding capacity, 270; and per cent of saturation, 19. Direct and indirect Coombs studies were negative. Euglobulin lysis time, Lupus erythematosis preparation, and antinuclear antibody studies were normal. Other standard blood chemistry determinations were within normal limits. Stool for occult blood on two occasions was 4+. Gastric contents revealed no blood. Barium enema study of the colon and upper gastrointestinal x-rays with small bowel detail study were interpreted as being normal in all respects.

One half hour following admission the patient developed a marked hypotensive episode. The blood pressure fell to 86/40 and she experienced syncope and diaphoresis. Review of her hematocrit at that time revealed that a significant reduction in red cell mass had occurred. Passage of mahogany colored guaiac positive stools indicated a most definite gastrointestinal hemorrhage. The patient's cardiovascular status was stabilized with the immediate infusion of lactated Ringer's solution followed by 2 units of whole blood. Over the succeeding 48 hours her hematocrit stabilized at from 24% to 25%. Despite failure of x-ray confirmation, the patient was placed on a strict ulcer regimen. After the initial 48 hours of hospitalization there was a complete resolution of nausea and vomiting as well as abdominal discomfort. On the third day she was ambulatory and exhibited a ravenous appetite for the imposed Sippy diet supplemented with oral iron therapy. The hematocrit very promptly rose to 28% on the third day of hospitalization and 32% at the time of her discharge on May 19, 1972. During the remainder of her hospitalization no further evidence of gastrointestinal bleeding was in evidence.



Figure 1
Section of ileum showing deeply ulcerated carcinoid tumor (hematoxylin-eosin stain, X 4).

An occult gastrointestinal lesion of vast importance was most obviously present. With the available studies and clinical evaluation unable to confirm the definitive cause of the gastrointestinal hemorrhage, laparotomy was felt indicated. Accordingly on May 20, 1972, at the patient's request, she was transferred by air to her home in another state.

An exploratory laparotomy was performed on May 22, 1972 at which time a 1.5 cm. modular ulcerated lesion of the ileum was identified. The lesion was located on the anti-mesenteric border of the ileum approximately 100 cm. proximal to the ileocecal valve. No enlarged lymph nodes were identified and the liver was of normal appearance. Resection of the bowel 4 cm. on either side of the lesion was performed including a wedge of mesentery.

Gross appearance revealed ulceration of the overlying mucosa with a central crater-like area extending approximately one-third of the way into the bowel wall (Fig. 1).

Microscopic examination showed cellular character of typical carcinoid with nests of cells extending into the muscularis. There was no apparent penetration of the serosa. One out of five small lymph nodes in the included mesentery contained metastatic cells. Accordingly on May 25, 1972 the patient was re-operated. At this time approximately 20 cm. of bowel on either side of the former anastomosis was resected along with a wide wedge of mesentery down to the deep vessels at the base. Very meticulous evaluation of the abdomen again revealed no other evident lesions. Microscopic examination of this specimen identified no evident of metastasis. The patient was discharged in good condition on the 9th postoperative day and has since been asymptomatic. A postoperative 24 hour urine for 5-hydroxy-indole acetic acid was within normal limits.

COMMENT

There is probably no other gastrointestinal lesion that so regularly leads to such an indefinite or erroneous clinical impression as does carcinoid tumor. Carcinoid is a relatively uncommon tumor of the gastro-intestinal tract constituting approximately 8% to 10% of all malignant small bowel neoplasms. The lesions are, in general, small; 75% being less than 1.5 cm. in diameter. Rarely does an isolated tumor exceed 3.5 cm. in diameter. Approximately 30% of the lesions are found in the small intestine, 55% in the appendix, and 8.5% in the rectum.[8] Bronchus, gall bladder, testicle, and pancreas represent reported non-enteric sites of origin.. Because of the deep submucosal site of origin and small size, the primary tumor itself only rarely produces significant physiologic or anatomic symptoms of alteration with in the individual host.

Several large studies have found that patients with ileal carcinoid tumors generally manifest some symptoms from 3 to 4 years prior to the definitive diagnosis.[3] Once thought to be benign, most authors now agree that all carcinoids are essentially malignant if observed for a long enough period of time.[9] Local bowel wall invasion is the most common evidence of malignancy with lymphatic spread the most common route of metastasis. Although appendiceal carcinoids usually do not metastasize, small bowel carcinoids have been reported to be metastatic with an incidence of 25% to 55%.[10] This variable rate of metastasis may be explained by the apparent relationship of tumor size to metastatic potential. The likelihood of metastasis in lesions less than 1 cm. in diameter is less than 5%, 50% in those from 1 to 2 cm., and about 80% in those 2 cm. or more in diameter.[11]

Of interest is the marked tendency for multicentricity of origin of carcinoid tumor in the small intestine. Approximately one-third of patients present with 2, 3 or literally dozens of lesions studding the small intestinal wall.

Also of equal importance is the reported frequency of the co-existence of small intestinal carcinoids with other malignant neoplasms. An incidence in surgical cases of from 20% to 50% have been reported.[9]

Carcinoids when symptomatic within the ileum, usually manifest as abdominal pain. The character of the pain very often is most suggestive of intestinal obstruction. Local invasion of carcinoid tumor cells through the muscularis of the small intestine and into the mesentery usually stimulates a fibroblastic reaction. This fibrosis and scarring may cause a matting of bowel loops. Probably by virtue of subsequent scar contracture and buckling of the mesentery, associated kinking of bowel ensues. Obstruction of the bowel lumen may then occur. However, in many cases an almost equal number of individuals present symptoms of a non-specific type of abdominal pain giving no clue as to the underlying disease state. With the passage of time some weight loss, diarrhea, and abdominal pain will invariably occur. Roentgenologic studies usually are of little value in the definitive diagnosis of small intestinal carcinoid tumors. Again, because of their small size and deep submucosal position, a mucosal alteration is rarely noted. As previously stated, buckling or kinking of the bowel is the usual cause for the observed obstructive symptoms rather than true stenosis, intussusception or obstructing mass.

Abdominal mass has been the most commonly observed clinical sign. Small intestinal carcinoids, if palpable, usually are found in the right mid abdomen. As such, they may frequently be confused for an easily palpable right kidney.

It is evident that careful analysis of the picture of intermittent intestinal obstruction, nausea, weight loss, and diarrhea should always place carcinoid in consideration. Occult anemia or insidious gastrointestinal bleeding, as initially present in the case reported here, is a late manifestation and still relatively uncommon. Its presence, however, in conjunction with the symptomatology previously mentioned must demand strong suspicion for carcinoid tumor. Acute gastrointestinal hemorrhage occurs rarely. In the few cases reported, as in this case, the hemorrhage was initially of life threatening magnitude and demanded laparotomy for definitive diagnosis and therapy.

SUMMARY

A patient with an invasive and locally metastatic carcinoid tumor of the distal ileum manifested by a long history of occult anemia and ultimately an acute gastrointestinal hemorrhage is presented. Attention is once again called to the uncommon occurrence of acute gastrointestinal bleeding in individuals with carcinoid tumor. This must only more emphatically emphasize the importance of the consideration of carcinoid tumor in the evaluation of patients with occult severe gastrointestinal hemorrhage.

ACKNOWLEDGMENT

Robert Cordwell, M.D., Kellogg, Idaho and Larry K. Hatch, M.D., Spokane, Washington provided the necessary information to complete compilation of this presentation.

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JAMES M. STRANGEMEIER, M.D.

A SINGULAR LARGE SKULL METASTASIS FROM FOLLICULAR THYROID CARCINOMA IN A MOUNTAINGYARD FEMALE

The incidence of thyroid cancer in Vietnam Mountaingyards is unknown. Personal observations and observations of others does seem to indicate an increased number of Mountaingyard people with very large goiters. Presumably this is a result of decreased iodine in their diet. The Mountaingyards live in the Central Highlands of South Vietnam.

In general, follicular thyroid carcinoma metastasises by blood vessels — to lung and bone. The skull, scapula, clavicle, vertebrae, are common bones where this occurs.[1]

This patient had a single large metastasis located in the left parietal skull. This was as large a lesion as the primary. This patient then with her large neck mass, a not "uncommon finding" in these people, did not initially arouse our suspicion sufficiently that her equally large head tumor could be directly related.

CASE HISTORY

This 45-year-old female was first seen on October 5, 1970 and referred to 71st Evacuation Hospital by Dr. Pat Smith of Kontum, South Vietnam, complaining of a large mass on her head and a mass in her neck. The neck mass had been present for about 3 years, and the head mass about one year. Neither was especially uncomfortable to her.

There had been no trauma to the area on the head. Despite the size of the enlarged thyroid she did not complain of dyspagia or dyspnea.

She was a well developed and well nourished female — by native standards. There was a large, firm, tense, non-pulsating mass over the left parietal area. It was approximately 7 cm., greatest diameter at its base and 6 cm. high. No murmur was heard over the mass. This had been aspirated by one of her doctors and only a few drops of blood returned.

The neck mass was hard, moderately movable and it had pushed the right carotid artery laterally and the trachea to the left. No murmur

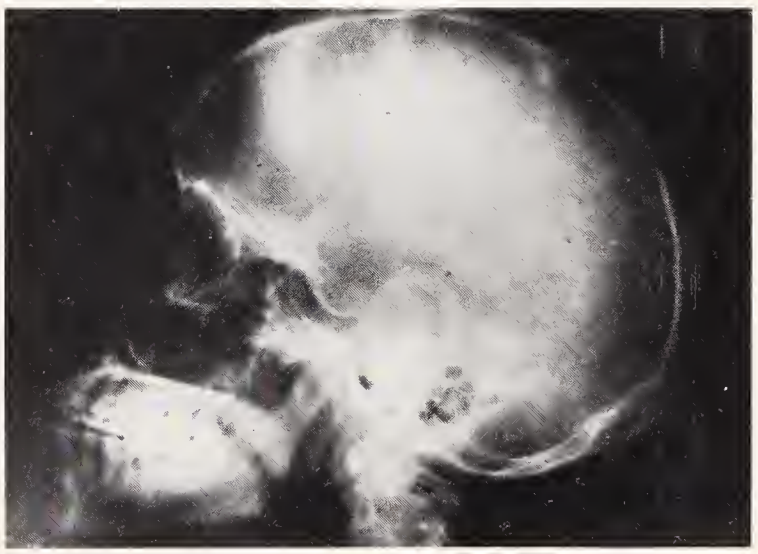


Figure 1
Lateral view of skull showing defect in left parietal bone

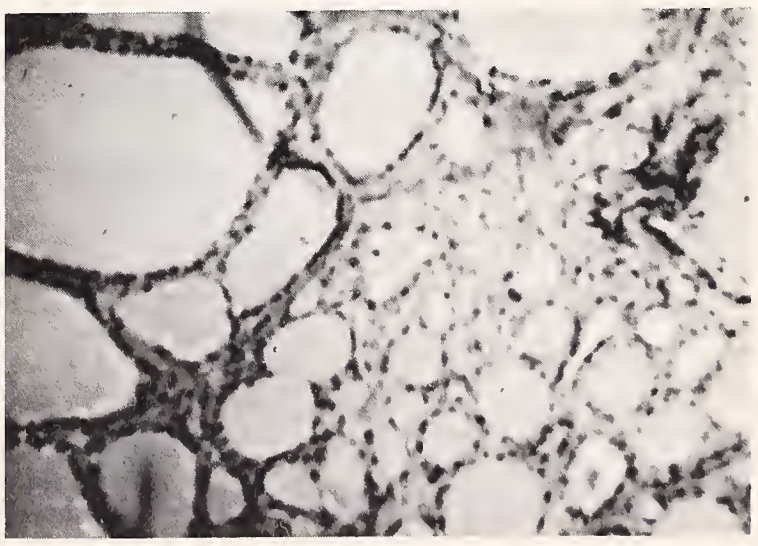


Figure 2
Photo micrograph of metastatic lesion to skull

From 500 W. 10th Place, Mesa, AZ.

was heard over the thyroid. There was no vocal cord paralysis.

The rest of the examination was essentially normal.

Chest X-ray and bone survey were negative, except for the skull. A 7 cm. defect on the left parietal bone was thought to be through both tables of bone. There was evidence of new bone or calcium in the center of the mass.

HOSPITAL COURSE

On October 9, the head mass was removed. It was very vascular and had eroded through the skull and depressed the Dura about 4 cm. The center of the tumor was a fibrous and gelatinous consistency. As much tumor as possible was removed, including a margin of skull. The pathologist called it a Follicular Thyroid Carcinoma.

On October 22, a right thyroid lobectomy and isthmectomy was done. The left lobe grossly was normal and most was left in. This was done in order to leave her some source of thyroid. Total thyroidectomy would have left her to become myxedematous because she would have no source of thyroid medication. There was no injury to her laryngeal nerve.

The pathology report was follicular thyroid carcinoma.

On October 24, she developed jaundice with a bilirubin up to 10. The jaundice resolved in about 10 days.

Liver biopsy was done. This was consistent with that of reaction of fleurothane which was her anesthetic on the first surgery. Penthrane was used as the anesthesia in the second operation.

She was discharged November 3, 1970, feeling well and gaining weight.

(Followup to this point has been sought from Dr. Pat Smith of Kontum, but not yet obtained.)

The photograph shows a rather striking appearance of the patient's tumors.



Figure 3
Appearance prior to surgery



Figure 4
Appearance after surgery, recovered with her husband

DISCUSSION

It is occasionally mentioned that follicular metastasis to bone will pulsate, this one did not.

Upon reviewing several articles on this point, I found that relatively few of the large follicular thyroid metastasis did pulsate. In Dinsmore's study of 1934, only two of eighteen cases did pulsate. This classification of pathology however does not specify these as follicular. One was a "malignant adenoma" and one "adenocarcinoma." Since the accepted classification has changed drastically since 1924, we cannot know for certain if they were follicular or not. I suspect we can believe these might have been follicular adenocarcinomas if classified today.

McCormack has a good brief review of thyroid metastasis indicating the incidence to bone being from 1-40% (16, 13) with follicular the most comm, 4. 15. 18.

SUMMARY

This is a case report of a 45-year-old Mountaingyard female who had a primary thyroid cancer, and a single large metastasis to the skull.

Treatment was surgical removal of the metastasis and of the right lobe and isthus of the thyroid. It would have been nice to give her thyroid to suppress her tumor after surgery, but because of the social problems of Vietnam the most we could hope for is surgical palliation.

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EXCELLENCE, MEDICAL EDUCATION AND MEDICAL CARE

Medicine's high purpose is to develop and apply knowledge for the benefit of our fellow men. Academia deals with these matters at basic and clinical research levels as well as in the education of medical students and in the training of a number of interns and residents. However, the bulk of the people who receive care in the United States, including Arizona, are in physicians' offices or in community hospitals and there are also a large number of interns and residents who are very well trained in non- university hospitals. This far-flung system of intern and resident training has been one of the effective factors in diffusing our medical talent across the land. In that internships will not be continued beyond 1975 unless they fit into the continuum concept (student to resident) and because of multiple pressures to discontinue non-university residency programs, academia is being challenged relative to their capability to meet the needs, particularly that of diffusion and implementation of medical excellence already attained.

Russell B. Roth, M.D. (Johns Hopkins), President-Elect of the A.M.A. states in Prism (Vol. 1, No. 2, May, 1973) that "the interests of our people are likely to be better served in a system wherein the community hospitals of our land participate in our expanding educational efforts than in one where education is concentrated in splendid isolation".

Now is the time for the medical educational and teaching hospital talent in Arizona to develop the optimal system in these areas, including the dissemination of knowledge and health care. Should the excellent teaching programs in Maricopa County become the catalyst for a Postgraduate School of Medicine under the Board of Regents, under the University of Arizona or under Arizona State University? Should the University of Arizona Medical Center in Tucson absorb all of the training programs in Tucson and Phoenix? Is a pleuralistic or a monolithic approach preferable in these areas from the standpoint of the pursuit and dissemination of excellence of medical education and medical care? These and other related matters will be studied by the Medical Education Committee of the Arizona Medical Association during the coming year.

John R. Green, M.D.

Editor's Page

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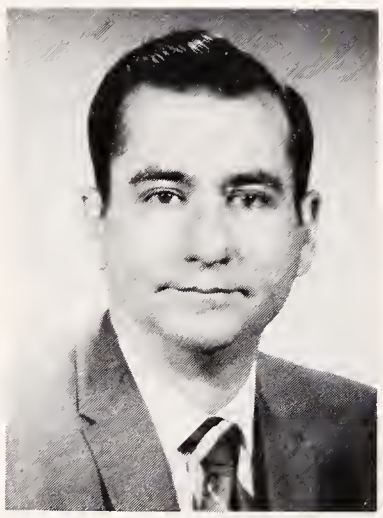
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President's Page

PRESIDENTIAL ADDRESS



PHILIP E. DEW, M.D.
PRESIDENT

Dr. Standifer, Members of the Association, Honored Guests:

I come before you today with a deep sense of honor and humility. As the first pediatrician ever elected to this office, I hope you will understand when I think in terms of grids and norms. A recent RMP evaluation of Arizona Medical Manpower, placed the average age of physicians in this state as 47.6 years and the average time in practice as 17.8 years. When I read the figures recently, I was exactly average in each! Being at the 50th percentile is the only logical pediatric explanation for my being here before you today.

Presidential Addresses have been of two basic types in the past:

1. Philosophic

or

2. Pragmatic

It is now thirteen years since Lindsay Beaton gave his monumental address of the first type. Like all good literature, it is timeless. If I were to read it here today as my own, you would accept it as current and appropriate. I have chosen to take the pragmatic route, and will review the problems of organized medicine and where we stand with them. This, then, is a State-of-the-Union type approach. What are the problems and what are we or what should we be doing about them? Listen and watch!

Quite frankly, I am not sure I, or anyone else for that matter, can follow what you have just seen and heard. It should be abundantly clear to each of you that this meeting must constitute a new beginning for each of us in whatever

capacity we serve this great Federation of American Medicine. And so I welcome you to continue in response to the challenge now laid before you.

I think it is appropriate that we examine the Arizona Medical Association in light of these problems.

1) *Membership.* Arizona is one of six states which has unfied membership. A physician here must join all three if he chooses to join any portion of organized medicine: County, State, AMA. In each of the past two years, our House of Delegates has turned down attempts to destroy the unified membership concept in Arizona. Our membership picture is actually bright here. Dr. Standifer received an AMA Award, as one of the states increasing its membership most rapidly this past year. Does this mean we have no problem in this area? Not at all. A recent comparison of our Board of Medical Examiners data, and our membership rolls shows that perhaps 500 physicians in this state do not belong to any level of organized medicine. Granted, many of these are retired people or service people. However, there is still work to be done. Is it important? Recently we had a speech before the Pima County Medical Society relative to the dangers of the divide-and-conquer technique used in socializing medicine in England. Without much effort or imagination, most of us can envision ways in which those bent on destroying the power of our organizations might use a similar technique in this country. With this in mind, we plan to seek greater participation of full-time teachers, interns and residents, and medical students during this year and in the future. In your Delegate's Manual you have a resolution giving full voting privileges to interns and residents at 1/10 the usual dues. You also have another resolution, asking you to make it possible for medical students, through their local SAMA Chapter, to get two votes in our House of Delegates. I hope you will give these resolutions careful consideration and favorable action. I also hope that component county societies will change their bylaws to make it possible for these things to be achieved. As a bonus for relative success in this area, we will get another delegate to the AMA in 1974 since we now have over 2,000 members. I will be appointing a committee to study AMA representation from the state level, both in terms of method of election and regionalization.

2) *Changes in Medical Practice. Professional Standards Review Organizations, Known as, PSROs.* Irrespective of the pros or cons of PSRO, Public Law 92-603 mandates the establishment of these organizations. Henry Kaiser once said that "a problem is an opportunity in work clothes." I think this should be our approach to PSRO. This does offer us an opportunity to do our best to maintain quality, and when necessary, to improve it. The opportunity rests with the profession alone at the outset. The United Medical Care Foundations of Arizona has already made informal application to HEW to be the PSRO for the State of Arizona. You have a resolution asking you to support our position in this regard so that we may make a more formal application. I hope you will give favorable consideration to this resolution as well. As to national health insurance, we really have no inside information. However, one famous Arizona resident who recently returned to us after service in government, did state publicly, at a recent Pima County Medical Society meeting, that some form of national health insurance will probably be passed in 1974 and implemented by 1976. This anonymous leader pointed out that it probably will be an extension of the catastrophic idea, rather than the type of proposal Senator Kennedy has espoused. As for HMOs, we have continued to believe in the pleuralistic delivery system we now have here in Arizona. We have worked at the local and state levels in attempts to innovate and cooperate with health planners. And, we shall continue to do so for the benefit of our patients.

3) *Continuing Medical Education.* The Arizona Medical Association was the second state organization to have continuing medical education as a requirement for membership. Our Certificate in Continuing Medical Education has reciprocity with the AMA's Physician Recognition Award, and with that issued by the American Academy of Family Practice. One application does the whole thing. Applications are coming in very rapidly now, and it appears this effort will be an overwhelming success.

Professional standards review has some built-in booby traps. It is possible to have

organized mediocrity in patient care as a consequence of these norms. This does not detract from the fact that each of us must continue to keep his knowledge current for the benefit of his patients. Getting enough hours to qualify for the continuing medical education certificate poses more of a problem for those of you in outlying areas. There has been a change allowing for 25 hours for individual study and I hope the RMP Program for getting the education effort to regional centers (CESA) will go forward, even if RMP is phased out. Perhaps, the U of A and ArMA could pursue this together.

This is not what concerns us the most. What does and should concern us is how it is possible, in this day and age of exploding knowledge, to keep current and to know that we haven't fallen behind in crucial areas. I plan to recommend to the medical education committee, that they explore the possibility of simplifying the process of keeping up. I would like them to examine the possibility of the AMA, the specialty societies and the National Board of Medical Examiners, setting up and ongoing annual effort, the intent of which would be to have a current body of knowledge updated in practical terms each year. This would make it possible to have a finite body of knowledge to learn each year that would give some assurance of keeping up with any given field. This standard knowledge could be presented in journals, in courses and on tapes. New advances not yet proven could be presented at different meetings and in other ways.

4) *Legislative Priorities.* It is reassuring to know from a recent public relations poll that the general public still holds his own physician in high esteem. It would seem to be true that the voiced opinion of the family doctor will have more impact than any other single element in the medical community as the public makes up its mind about the approaches to financing health care. We have attempted through Medical Memos and other communication devices, to keep each physician informed about the basic problems of legislation. However, I am sure, most of us could not knowledgeably explain the differences between the various national health insurance bills. This concerns us greatly. Yet, I am more concerned about another aspect of this problem of imagery. I am concerned about improving the acceptance of the Medical Association as well as the individual physician in the community. At a recent AMA Leadership Conference, I attended a discussion on improving the acceptance of the medical society in the community. The three experts there made one point unanimously: The physician must extend himself more into the community and help solve the community problems. This is how the leaders of the community will continue to support both the physicians and their organizations in return. Each of us must care enough and be willing to work and join one more community organization, to help with one more fund-raising event, and to look into the community problems which we cannot solve in our offices but which belong to us just as they belong to the rest of the community. Leaders, like everyone else, cannot be completely informed and probably will make their judgments about our future according to how well they know us and like us, individually or collectively.

5) *Communications.* A month or so ago, we sent out an invitation to interested members of the association to become involved by being assigned to a committee of his choosing. We received about 200 responses which represents one-tenth of our active membership. The time has come for ArMA to become our MA. I am not letting any of you off the hook this year. I am going to start with some suggestions of objectives. I want you to vote, amend, or delete, but I want you to help. There is no longer any time for *us and them.* It has got to be *we* from now on. Do not hesitate to send suggestions and don't forget our enterprise number – 265 from Tucson, and ArMA will pick up the tab if you call long distance from any of the outlying counties.

The following quotation is from Tom Lewry, who was president of the Philadelphia Rotary Club this past year:

"The trouble with our world today.
Everyone despairs.
Is the apathy we all display
True, but then who cares?"

I submit that the members of our MA do care, and that we will *all* work together to solve the problems facing us today.



CLINICAL PATHOLOGY TEACHING

No consensus appears to have arisen concerning the place of teaching Clinical Pathology (Laboratory Medicine) to medical students in the United States. Similarly, no firm consensus has emerged concerning the method of teaching Clinical Pathology, especially the question of how great a part laboratory exercises should play and what their purpose should be. Emphasis has shifted from the position that physicians must be able to perform skillfully a variety of simple clinical laboratory examinations to the realization that few of them have either the time or the inclination to perform them, and most physicians delegate the tasks to others. At the same time, the need to understand the complexities and the limitations of laboratory tests and to analyze laboratory data perceptively has gained increasing attention in the teaching of Clinical Pathology.

This lack of consensus, which undoubtedly reflects dissatisfaction with traditional methods of teaching Laboratory Medicine, should be a goal toward innovative approaches, for which the new, so-called individualized curricula in medicine proved opportunities.

At the University of Arizona, we are experimenting with three types of teaching programs in Laboratory Medicine. The first of these involves taking part in an integrated basic science and clinical system-and-organ-oriented curriculum which extended throughout the second year in the old curriculum but through the second half of Phase I in the new. This effort has been successful in the teaching program on the hemopoietic system, the kidney, and the lung. During the section on the kidney, for example, the basic anatomic pathology has been correlated with urinalysis, renal function tests, clinical microbiology, and clinical laboratory immunology of renal transplantation.

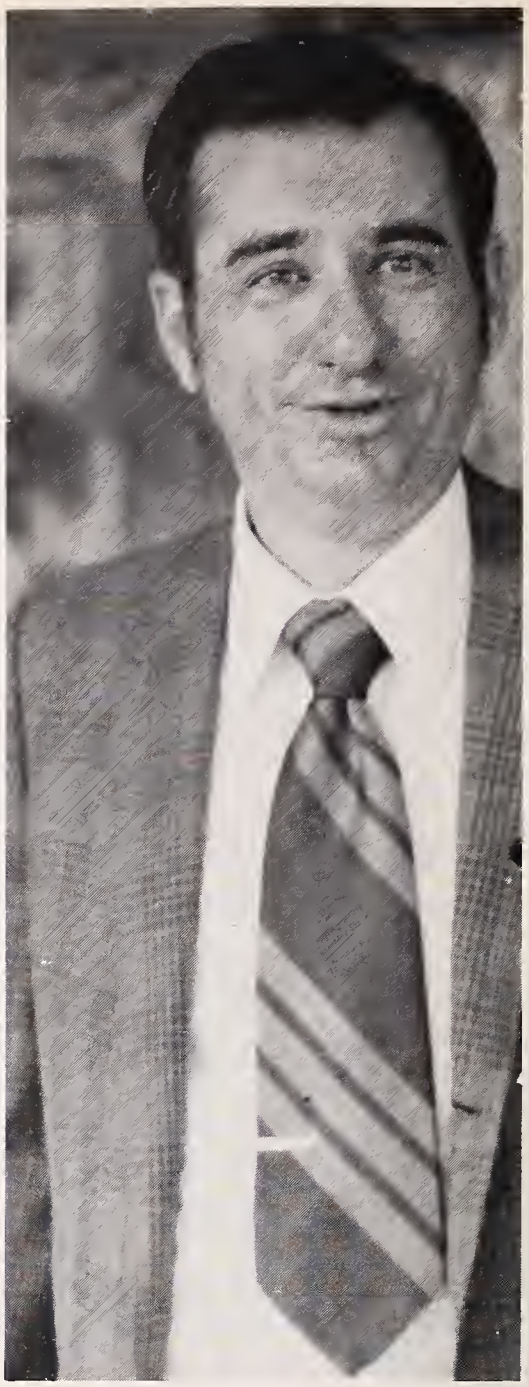
Experiences that have been particularly enlightening to both students and faculty have arisen from our presentation of topics in Clinical Pathology in a series of elective courses in the third and fourth years, and now in Phase III during which electives may be taken in the curriculum. We have organized electives in special topics in the sections of Hematopathology, Clinical Chemistry, Clinical Microbiology, Immunohematology, and Anatomical Pathology. These are learning experiences with a close interaction among faculty and students. The emphasis is placed on clinical problem-solving using laboratory data analysis, in the derivation of which students participate actively. It is obvious that at this state of their experience, students are able to enter actively into discussions of laboratory tests, their uses, and their interpretation. Students are now aware of unfulfilled potentials of laboratory methods and are eager to increase their ability to use the laboratory in clinical problem-solving.

A new teaching program we hope to be able to initiate aims to teach the student basic laboratory skills at the time he is learning other basic clinical skills preparatory to his experience as a clinical clerk. At this time, laboratory skills of specimen acquisition, routine screening procedures, the use and misuse of laboratory, quality control, standards of reference, and sources of error would be learned. Laboratory analyses would be correlated with brief case histories.

From our experiences to date, the realization has emerged that, in order to have maximum relevance to the medical school experience of new physicians, Clinical Pathology should be taught not only early in the curriculum but also later when the student is acquiring his clinical competence through first-hand experiences in patient care. The early teaching affords a background for his clinical clerkship learning effort; the later teaching places his laboratory ability in the context of his entire clinical laboratory experience and provides a basis for his optimal utilization of laboratory sciences and data as an intern and resident.











Annual Meeting Highlights








Dr. Skinner
Dr. Schamadan
Dr. Schaller
Dr. Pettier
Dr. Brill


Dr. PAINE
Dr. DEW



















Topics Of Current Medical Interest

THE ARIZONA MEDICAL ASSOCIATION, INC.

RESUMÉ
of the
HOUSE OF DELEGATES
1973 ANNUAL MEETING
APRIL 28, 1973

Adjourned meeting of the House of Delegates of The Arizona Medical Association, Inc. held in the Convention Center of the Safari Hotel, Scottsdale, Arizona, Saturday, April 28, 1973, convened at 8:11 a.m., Robert A. Price, M.D., Speaker of the House, presiding.

CREDENTIALS

The Credentials Committee reported a quorum present and the House duly constituted.

ROLL CALL

On the roll call, 88 Delegates (and/or Alternates) and 21 members of the Board of Directors were present.

MINUTES

Minutes of the meeting of the House of Delegates held April 27, 1972, were approved without reading.

ELECTION OF OFFICERS

The following officers were elected for a term of one year:

President-Elect William G. Payne, M.D.
Vice President William C. Scott, M.D.
Secretary Edward Sattenspiel, M.D.
Treasurer Richard L. Dexter, M.D.
Speaker of the House Robert A. Price, M.D.
Editor-in-Chief John R. Green, M.D.

The following were elected for the term: 1/1/74-12/31/75:

Delegate to AMA Daniel T. Cloud, M.D.
Alternate Delegate to AMA Riehard O. Flynn, M.D.

ELECTION OF DISTRICT DIRECTORS

The following District Directors were elected:

Central District Director
George L Hoffman, M.D. (1973-1976)
Central District Direetor
Charles H. Finney, M.D. (1973-1976)
Northwestern District Director
John F. Kahle, M.D. (1973-1976)
Southern District Director
Henry P. Limbaeher, M.D. (1973-1976)
Southeastern District Director
Bruce N. Curtis, M.D. (1973-1974)
(to fill unexpired term of William W. McKinley, Jr., M.D.)

REFERENCE COMMITTEE ON RESOLUTIONS

Report of the Reference Committee on Resolutions, as deleted, amended, or as otherwise disposed of, adopted with the following actions taken on motions regularly made and carried.

Resolution Number 1-73

Subject: 1974 CALENDAR YEAR BUDGET OF INCOME AND EXPENSE

WHEREAS, It is customary for the House of Delegates to approve the Budget of Income and Expenditures for the next succeeding calendar year of the Arizona Medical Association, Inc.; therefore be it

RESOLVED, That the following Budget of Income and Expenditures for the calendar year 1974 be adopted as follows:

	Income	Expenditures	Contingency
General Operations	$222,500	$207,200	$15,300
Committee Operations	3,000	33,940	(30,940)
Annual Meeting	38,900	33,660	5,240
Publishing Operations	61,880	54,000	7,880
Building Operations	31,400	23,500	7,900
Benevolent & Loan	600	500	100
TOTAL	$358,280	$352,800	$ 5,480

; and be it further

Resolved, That the annual dues of the Arizona Medical Association, Inc. be continued at $120 for Active members with $110 going to General Operations Budget and $10 going to the Publishing Operations Budget; and be it further

RESOLVED, That the Service member dues be $30 with $20 going to the General Operations Budget and $10 going to the Publishing Operations Budget; and be it further

RESOLVED, That the Intern or Resident Active member dues be $11 with $1.00 going to the General Operations Budget and $10 going to the Publishing Operations Budget.

ADOPTED, APRIL 28, 1973

Resolution Number 2-73

Subject: UNITED MEDICAL CARE FOUNDATIONS OF ARIZONA, INC., AS THE PROFESSIONAL STANDARDS REVIEW ORGANIZATION FOR ARIZONA

RESOLVED, That the Arizona Medical Association wholeheartedly endorses the United Medical Care Foundations of Arizona, Inc., as the organization best qualified to be the Professional Standards Review Organization (P.S.R.O.) for the region encompassing the State of Arizona.

ADOPTED, APRIL 28, 1973

Resolution Number 3-73

Subject: FOOD AND DRUG ADMINISTRATION

RESOLVED, That because the Food and Drug Administration controls have done our patients more harm than good, the members of the Arizona State Medical Association request Congress and its appropriate committee consider revoking the Kefauver Harris Act of 1962, thus phasing out the above named agency.

NOT ADOPTED, APRIL 28, 1973

Resolution Number 4-73

Subject: TAX CREDIT TO DISADVANTAGED AREA MEDICAL PRACTICES

WHEREAS, It has been and remains very difficult to obtain physicians in outlying and small communities; and

WHEREAS, In recognition of the fact that even though economic incentives are not the major motivation for rural or disadvantaged area practice, there are more significant factors existing; therefore be it

RESOLVED, That the Arizona Medical Association actively support national legislation to grant federal income tax credit to medical practices established in disadvantaged communities and areas of critical physician need; and be it further

RESOLVED, That the Arizona Medical Association actively support state legislation to grant state income tax credit to physicians who establish medical practices in disadvantaged communities and areas of critical physician need.

ADOPTED AS AMENDED, APRIL 28, 1973

Resolution Number 5-73

Subject: AMERICAN BOARD OF ALLERGY AND IMMUNOLOGY

WHEREAS, The Conjoint Board of Allergy, now known as the American Board of Allergy and Immunology, was established without the approval of the American Medical Association's House of Delegates; and

WHEREAS, The new Board does not represent fully all physicians who practice allergy, mainly those in dermatology, otolaryngology and family practice; therefore be it

RESOLVED, That the House of Delegates not approve the residency training program as prescribed by the Council on Medical Education until all fields of allergy are represented; and be it further

RESOLVED, That the delegates to the American

Medical Association be instructed to present and support this resolution to the American Medical Association's House of Delegates.

NOT ADOPTED, APRIL 28, 1973

Resolution Number 6-73

Subject: PROVISION FOR DIRECT STUDENT REPRESENTATION IN ArMA

WHEREAS, It is clear and appropriate that organized medicine should be cognizant of and its policies responsive to all elements of the profession; and

WHEREAS, Organized medicine should strive to be similarly aware of and responsive to all elements of the American Public, a goodly portion of which enjoys relative youth; and

WHEREAS, Future physicians currently in undergraduate medical training are sensitive to and, in many instances, share the opinions and goals of a great part of the American people by reason of their age; and

WHEREAS, The policy-making bodies of each level of organized medicine are specifically designed to reflect the desires and viewpoints of all elements of its membership; and

WHEREAS, Organized medicine should provide means to obtain the full benefit of the opinions and philosophies of its future as well as its present membership so that it may provide an optimum continuum of leadership for the profession; and

WHEREAS, As a state organization and as a component of the American Medical Association, the Arizona Medical Association is recognized as and should continue to be a progressive and responsive force in representing the needs of its entire constituency, specifically those of medical students; and

WHEREAS, The Arizona Medical Association should subscribe to the precept that future medical practitioners must participate in the decision-making process of organized medicine in order that it be responsive to and representative of all elements of the profession; be it

RESOLVED, The Arizona Medical Association Bylaws be amended at its 1974 Annual Meeting so as to give the Arizona Chapter of the Student American Medical Association two fully enfranchised seats in this House of Delegates; and be it further

RESOLVED, That these two voting representatives from the membership of the Arizona Chapter of the Student American Medical Association be elected annually by that organization by its voting membership prior to January first of each year.

ADOPTED AS AMENDED, APRIL 28, 1973

Resolution Number 7-73

Subject: MEDICAL EDUCATION ASSESSMENT

WHEREAS, The Arizona Medical Association has instituted a continuing education requirement for continued membership in our organization; and

WHEREAS, The physicians have accepted the necessity of continuing education for optimum care of the patient; and

WHEREAS, The Medical Education Committee of ArMA has been given the task of coordinating all medical education programs in the state, but no funds with which to accomplish it; and

WHEREAS, Federal and state funding are being withdrawn or were never available for postgraduate education of physicians; therefore be it

RESOLVED, That a yearly assessment, to be determined by the Medical Education Committee and approved by the Board of Directors of not more than $10, be levied against each member for the use of the Medical Education Committee in coordinating and support, if necessary, of postgraduate medical education in Arizona.

REFERRED TO THE BOARD OF DIRECTORS FOR THEIR CONSIDERATION, A FEASIBILITY STUDY, AND RECOMMENDATIONS, APRIL 28, 1973

Resolution Number 8-73

Subject: AD HOC COMMITTEE ON MATERNAL AND CHILD CARE

WHEREAS, It is recognized that improvement of the health of the entire population begins and depends upon improvement of maternal and child health as attested to in policy statements by the American Medical Association, the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics and the American Academy of Family Physicians as well as by the President of the United States in his statement on mental retardation of 1971 calling for "improvement in the delivery of medical, nutritional, and educational services to expectant mothers and young children"; and

WHEREAS, The responsibility for the development and implementation of programs for maternal and child health which, for the last four decades has been primarily at a national level is being progressively returned to the state level; and

WHEREAS, The American Medical Association was responsible for the initiation of a national ad hoc committee on perinatal health made up of representatives of the American Medical Association, the American College of Obstetricians and Gynecologists, the American Academy of Pediatrics, and the American Academy of Family Physicians and coordinated by the National Foundation (March of Dimes); and

WHEREAS, The ad hoc committee on perinatal health will publish its report in May of 1973 recommending that planning for improvement in maternal and child care be done on a regional basis with due consideration to facilities, personnel and financing; and

WHEREAS, The American Medical Association, through its Committee on Maternal and Child Care is now setting up guidelines which will be published urging that each State Medical Association set up a committee on maternal and child care, which for maximum effectiveness and communications at the state level should be established as a free standing committee reporting directly to the Board of Directors of the State Medical Association; therefore be it

RESOLVED, That (A) an Ad Hoc Committee on Maternal and Child Care be established by the Arizona Medical Association.

(B) The Committee should be headed by a physician involved in maternal and child health appointed by the President of the Arizona Medical Association and should include at least one or more representatives from each of the several involved disciplines including family practice, obstetrics and gynecology, pediatries, Public Health and preventive medicine (who should be the Director of Maternal and Child Health of the State Department of Health).

(C) That the Articles of Incorporation and Bylaws Com-

mittee be instructed to draw up changes in bylaws establishing maternal and child care committee as a standing committee of the Arizona Medical Association.

ADOPTED AS AMENDED, APRIL 28, 1973

Resolution Number 9-73

Subject: JOINT HOSPITAL PARTICIPATION IN RESIDENCY, INTERNSHIP, NURSING, AND PARA-PROFESSIONAL TRAINING PROGRAMS

WHEREAS, The medical profession recognizes the need for major hospitals to participate actively in post-graduate formal training of interns and residents, nurses and paramedical personnel; and

WHEREAS, The charges to patients have traditionally borne a major portion of this significant expense; and

WHEREAS, The consumer groups, legislators, and the medical profession have become aeutely aware of the inequitable and burdensome financial load that such training programs entail for individual hospitals; and

WHEREAS, Both the quality of patient care and the quality of a given training program are undeniably interrelated; therefore be it

RESOLVED, That the Arizona Medical Association support the following urgent modifications in the current programs now functioning in our non-university major hospitals:

(1) Immeditely establish the Maricopa County Hospital as the base institution for Maricopa County from whieh all training assignments will be coordinated for that general geographic area; the University of Arizona will fulfill the same role in Pima County and its geographic environs.
(2) Officially involve the University of Arizona School of Medicine as parent academic organization. If there is some recalcitrance on their part to assume these responsibilities, the Arizona State Medical Association and the Board of Regents will be asked to assist in an appropriate manner.
(3) Affiliation of user hospitals as official members of the joint training program should be contractually bound to the University of Arizona and to the joint program strueture.
(4) Promote a commitment from Boards of Supervisors and the Board of Regents to promulgate mechanisms of financial support for such joint training programs.
(5) Promote a commitment from the Comprehensive Health Planning Councils and related agencies to look to appropriate assessments for user and non-user hospitals in supporting these programs.
(6) Promote a commitment from the State legislative bodies and the Board of Regents to financially commit themselves and the people of Arizona to supporting in part the health training programs aforementioned.

REFERRED TO THE MEDICAL EDUCATION COMMITTEE FOR STUDY AND REPORT BACK TO THE HOUSE OF DELEGATES 83RD ANNUAL MEETING, WITH PROPOSED AMENDMENTS (BY THE REFERENCE COMMITTEE AND JOHN R. GREEN, M.D. UPON WHICH NO OFFICIAL ACTION WAS TAKEN), APRIL 28, 1973

Resolution Number 10-73

Subject: ANESTHESIA PRACTICES

WHEREAS, Certain surgery billing procedures are considered to be unethical, however, nothing has been said of some anesthesia practices. There are reports of physicians using nurse anesthetists to administer anesthesia, and then submitting a bill to a patient that has only a physician's name attached. The bills are said to give no indication that a less experienced individual gave the anesthetic. The fees for the anesthesia administered by a nurse are reported as being the same as those of a licensed physician with specialty training in anesthesia; therefore be it

RESOLVED, That no physician may bill for an anesthetic not given by him unless such bill states that the anesthetic was administered by a nurse anesthetist; and be it further

RESOLVED, That any fee received by a physician must be earned by being immediately available to assist a nurse anesthetist while that patient is under anesthesia; and be it further

RESOLVED, That any physician who collects fees for a nurse anesthetist's work without the patient being made aware in writing that their anesthesia was given by a nurse anesthetist is grossly unethical; and be it further

RESOLVED, That any physician who collects a fee for a nurse's anesthesia without being immediately available for consultation when the patient is under anesthesia is guilty of ghost anesthesia and shall be subject to a charge of unethical practices subject to the censure of his peers.

REFERRED TO THE PROFESSIONAL COMMITTEE ALONG WITH THE PROPOSED AMENDMENTS BY DALE F. WEBB, M.D. & JOHN LINGENFELTER, M.D., APRIL 28, 1973

Resoultion Number 11-73

Subject: APPRECIATION FOR ArMA 82ND ANNUAL MEETING

WHEREAS, There has been a record attendance at this the 82nd Annual Meeting of the Arizona Medical Association; and

WHEREAS, The meeting has run with pleasing and gratifying smoothness and punctuality; and

WHEREAS, This is a result of a great deal of thoughtful effort on the part of the Arizona Medical Association Executive and Secretarial Staff and the Scientific Assembly Committee and the Reference Committees and Speaker; now therefore be it

RESOLVED, That these individuals be given a sincere and heartfelt vote of appreciation for a job exceedingly well done.

ADOPTED, APRIL 28, 1973

REFERENCE COMMITTEE ON AMENDMENTS

Report of the Reference Committee on Amendments, as deleted, amended, or as otherwise disposed of, adopted with the following actions taken on motions regularly made and carried.

Resolution Number A-1-73

Subjeet: ACTIVE MEMBERSHIP STATUS FOR
Membership — Section 3 — Paragraph A & C. Section 4 — Paragraph B.
INTERNS & RESIDENTS — Chapter II — Chapter IX — Dues and Assessments — Section 3

RESOLVED, That Chapter II — Membership, Section

3. — Classes of Membership — (A) Active Members — be amended to read:

All active members of all the county societies shall be active members of this Association. The minimum qualifieations for active membership (OTHER THAN FOR INTERNS AND RESIDENTS) in a county society shall be that the individual must (1) hold the degree of doctor of medicine or its equivalent or doctor of osteopathy, (2) be an American citizen, or have made application for American Citizenship papers (in which case, he must make reasonable progress toward full citizenship or his membership shall lapse), (3) hold an unrevoked license to practice medicine and surgery or osteopathic medicine and surgery in the State of Arizona, (4) be a legal resident of the State of Arizona, (5) fulfill the continuing medical education requirements of the Arizona Medical Association. Subject to these minimum qualifications and to the provisions for loss of membership (Chapter II, Section 4), each county society shall be the exclusive judge of the qualifications of its members.

INTERNS AND RESIDENTS WHO ARE LICENSED OR REGISTERED WITH THE BOARD OF MEDICAL EXAMINERS, STATE OF ARIZONA, ARE ELIGIBLE FOR ACTIVE MEMBERSHIP IN A COUNTY SOCIETY.

Rights. An active member shall have all the rights and privileges of the Association as herein provided. INTERN AND RESIDENT ACTIVE MEMBERS SHALL PAY TEN PER CENT THE DUES OF OTHER ACTIVE MEMBERS AND WILL BE EXEMPTED FROM SPECIAL ASSESSMENTS: and be it further

RESOLVED, That Chapter II — Membership, Section 3. — Classes of Membership — (C) Associate Members — be amended to read:

Associate members may be elected by the Board, upon recommendation of the society of the county in which such members reside, from those doctors of medicine or osteopathy, who are licensed to practice medicine and surgery or osteopathic medicine and surgery in Arizona, but are (1) disabled and unable to practice, (2) retired from active practice and not eligible for Fifty-Year Club membership, (3) active members who leave practice to undergo a further training period lasting six months or more, or for military service [*or (4) interns and residents who are participating in an approved internship or residency program in the State of Arizona.*] and be it further

RESOLVED, That Chapter II — Membership, Section 4. — Loss of Membership — (A) be amended to read:

A) Active, Associate or Fifty-Year Club membership in this Association shall be lost by:

(i) Final expulsion from the county society through which he is an active member of the Association.

(ii) Transfer of membership to a county society of another state, and thereby to another state association, except as provided in Chapter III, Section 3.

(iii) Voluntary resignation, which shall be without prejudice.

(iv) Action of the House of Delegates (see Chapter VI, Section 6; Chapter VIII, Section 9).

(v) Revocation of the member's license to practice in Arizona. This latter clause shall effect immediate loss of membership as of the date of revocation.

(vi) TERMINATION OF BOARD OF MEDICAL EXAMINERS REGISTRATION OF INTERN OR RESIDENT ACTIVE MEMBER. THIS LATTER CLAUSE SHALL TAKE EFFECT AT THE END OF THE CALENDAR YEAR.

[vi] (vii) Failure to maintain membership in good standing in the American Medical Association.

[vii] (viii) Failure to pay Association dues and assessments within one year of the date such become payable, unless such failure be exempted under Chapter IX, Section 5.

[viii] (ix) For active membership, failure to fulfill the continuing medical education requirements of the Arizona Medical Association elsewhere in the bylaws; and be it further

RESOLVED, That Chapter IX — Dues and Assessments, Section 3. — Equality Within Membership Categories of Dues and Assessments — be amended to read:

While the amount of dues or special assessments may vary as between classifications of membership (except as to certain classes upon which none may be levied as provided in subsection 5 hereof), they shall be uniform within each classification, EXCEPT FOR SERVICE, INTERN, AND RESIDENT ACTIVE MEMBERS (SEE CHAPTER II, SECTION 3).

Note: All bracketed, italicized words represent deletions; all fully capitalized words are new material.

ADOPTED AS AMENDED, APRIL 28, 1973

Resolution Number A-2-73

Subject: SERVICE MEMBERS
Chapter II — Membership — Section 3.
Paragraph D

RESOLVED, That Chapter II — Membership, Section 3. — Classes of Membership — (D) Service Members — be amended to read:

Upon recommendation by a county society, the Board may elect as service members regularly commissioned medical officers and commissioned officers of the reserve component who hold the degree of Doctor of Medicine or Bachelor of Medicine or Doctor of Osteopathy, on extended active duty with the United States Army, the United States Navy, the United States Air Force, the United States Public Health Service and the permanent medical officers of the Veterans Administration.

Rights. Service members shall have all the rights and privileges of active members [*except the right to serve as Delegates or to hold elective office.*] They shall pay one-quarter the dues of active members [.] AND MAY BE EXEMPTED FROM SPECIAL ASSESSMENTS.

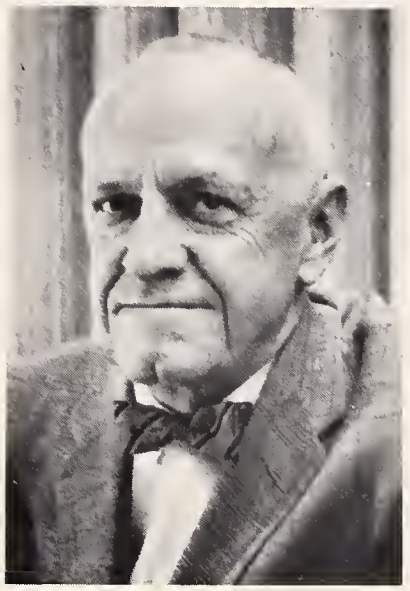
Note: All bracketed, italicized words represent deletions; all fully capitalized words are new material.

ADOPTED AS AMENDED, APRIL 28, 1973

MEETING ADJOURNED SINE DIE AT 10:16 A.M.

Edward Sattenspiel, M.D.
Secretary
by
Bruce E. Robinson
Executive Director

BLOOD TRANSFUSION COST REDUCED



W. QUINN JORDAN,
President, Blood Services



JOHN B. ALSEVER, M.D.,
Vice President for Medical Affairs
Blood Services

After April 1, 1973 patients in more than 800 hospitals throughout the country will benefit financially from a voluntary blood donor program launched by Blood Services less than a year ago. An unprecedented reduction of from 8-13% for service fees for three blood components is in sharp contrast with the national spiral of increased costs for all forms of health care and should also encourage more selective use of these portions of the pint of whole blood.

In a March 1st letter to the administrators of hospitals served by the nation's largest network of community centers, Blood Services' President W. Quinn Jordan said that public response to their appeal "to give blood . . . freely" had made the reduction possible, and that the change should also serve to increase the utilization of red blood cells.

"Leading medical authorities," said Jordan, "have maintained for many years that probably 80% of the patients who are given whole blood transfusions would receive the same benefit from the red blood cells. Additionally, we would be conserving an important national resource in the form of liquid plasma which is desperately needed for the preparation of other blood products."

"Another important consideration is the reduced risk of post transfusion hepatitis since most of the plasma ('dose' of virus) in carrier blood is removed."

Hemophilic patients will be the principal beneficiaries of the reduced costs for the other two components, since they are the primary users of fresh frozen plasma and cryoprecipitate.

In a concurrent move to eliminate the dollar value for blood itself, Jordan said that there would no longer be a monetary value attached to pre-deposit or replacement blood donations after April 1st. Said Jordan: "This change is not to be interpreted to mean that patients who have received blood transfusions will not be urged and encouraged to ask their friends and relatives to replace blood which has been provided for them. They will be. We are working with volunteer organizations so that the need for blood replacement will be discussed with the patient and his friends and relatives. Actually I think that they will feel more comfortable about this since they will no longer be placed in the somewhat awkward position of soliciting blood donations in order to pay part of their hospital bill.

"Needless to say, we are quite proud of our people who have worked so had to bring this about and grateful to the volunteer workers and blood donors who have given so generously of their time and of themselves. As we progress toward our objective of a 100% voluntary donor supply it is hoped that further reductions in service fees can be made."

THE GERALD B. LAMBERT AWARDS

Our group is interested in INNOVATIVE AND IMAGINATIVE IDEAS WHICH WERE DESIGNED TO IMPROVE PATIENT CARE OR REDUCE HEALTH CARE COSTS, and upon implementation proved to be successful in achieving those goals. Our purpose is to spread the word about these ideas in order to motivate others within the health care industry to implement these ideas and to encourage them to try other innovative approaches. Our Research Analysts search for ideas rather than persons or institutions.

We have no application forms. We ask only that entries answer this question: WHAT ARE YOU DOING DIFFERENT THAT SHOULD COME TO THE ATTENTION OF THE AWARDS COMMITTEE? Everything received is read carefully by our Research Analysts and receives equal consideration with all other entries.

The 1973 Awards will be presented in September. Enrties for the 1973 competition are being actively solicited and will be accepted through May 31.

For the 1972 competition, we contacted 2058 hospital administrators, 382 health/medical/science columnists, and 302 organizations aligned with the health care industry, asking them to suggest INNOVATIVE IDEAS for the competition. Also, our Analysts read 218 issues of the industry.s professional publications. Aside from the ideas in the publications, 1073 ideas were brought to the attention of the Research Analysts. Of these, 68 were brought to the attention of the Panel of Jurors. Through a series of eliminations, the ten Award-winning ideas were selected. Desrciptions of the Award winning ideas are available, upon request, from our office.

THE GERALD B. LAMBERT AWARDS were established in 1971 by Mrs. Lambert to memorialize her late husband, one of the nation's great innovators in government, business, housing, and many other fields.

THROUGH THE CAMEL'S EYE

By ROBERT E. HARPER

From first glimpse of dawn-glow,
I watched the Camel's back
Sponging up the lights of morning;
Rinsing out the changing colors —
Brown goes purple; green turns gold —
Into the bright whites of another high-noon.
Misting shadows round the proud brow
Caught the roving of my whimsey,
And, there, so quickly but distinctly,
I saw the Camel wink his eye,
And my day was made enraptured,
In the splendor of the valley of his smile.

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.



INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

NEOSPORIN® Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and 1/32 oz. (approx.) foil packets.

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Research Triangle Park
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Future Medical Meetings

TECHNIQUES OF INTRAVENOUS PACING

June 15, 1973, 3 p.m.-5 p.m.
Navapache Hospital, Lakeside, AZ

SPONSOR: Arizona Regional Medical Program

CONTACT:
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5725 E. Fifth
Tucson, AZ 85711

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NUTRITION NEWS WORKSHOP

June 18-22, 1973
Academic Service Building
Arizona State University

SPONSOR: Dept. of Home Economics ASU,
The Arizona Dietetic Assoc., Inc.

CONTACT:
Nutrition Workshop
University Extension
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Tempe, AZ 85281

WORKSHOP ON NEONATOLOGY

June 20, 1973
San Manuel Hospital, San Manuel
Gila General Hospital, Globe

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COMMON OBSTETRICAL PROBLEMS

June 26, 1973, 7-9 p.m.
Morenci Club, Morenci, AZ

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DIET AND OBESITY — PART II

June 26, 1973, 7 p.m.-9 p.m.
Marcus Lawrence Hospital, Cottonwood, AZ

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ARTHRITIS AND RELATED DISEASES

June 21, 1973, 10:30 a.m.-12:30 p.m.
Yavapai Community Hospital, Prescott, AZ

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CURRENT CONCEPTS IN THYROID DISEASE

July 14, 1973
Broadmoor Hotel, Colorado Springs, CO

CONTACT:
Dr. Frederick R. Gydesen, Dir. of
Nuclear Medicine
Penrose Hospital
2215 N. Cascade Ave.
Colorado Springs, CO

GYNECOLOGICAL LAPAROSCOPY

July 16, 17, 18 & 19
Good Samaritan Hospital
And the Surgicenter

SPONSOR: Good Samaritan Hospital, The Surgicenter and Arizona Family Planning Service

CONTACT:
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Program Chairman
c/o Arizona Family Planning Service
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16th ANNUAL RUIDOSO SUMMER CLINIC

July 16-19
Chaparral Motel, Ruidoso, New Mexico

SPONSOR: New Mexico Chapter of the American Academy of Family Physicians

CONTACT:
Bob Reid, Executive Secretary
P. O. Box 456
Sunland Park, N.M. 88063

33rd ANNUAL CONGRESS ON OCCUPATIONAL HEALTH

September 17-18, 1973
Benjamin Franklin Hotel, Philadelphia

SPONSOR: American Medical Association Dept. of Environmental, Public & Occupational Health

CONTACT:
Henry F. Howe, M.D., Associate Dir.
Dept. of Environmental, Public, & Occupational Health
American Medical Association
535 North Dearborn St.
Chicago, Illinois 60610

21st ANNUAL MEETING OF THE MEDICAL SOCIETY OF USA & MEXICO

October 10-13, 1973
Tucson, Arizona

SPONSOR: Medical Society of the United States and Mexico

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Mrs. Virginia E. Bryant, Exec. Sec'y.
333 West Thomas Road, Suite No. 207
Phoenix, AZ 85013

20th ANNUAL SCIENTIFIC ASSEMBLY

Arizona Academy of Family Physicians
October 17-25, 1973
Honolulu, Hawaii

SPONSOR: Arizona Academy of Family Physicians

CONTACT:
Mrs. June Boykin, Executive Secretary
Arizona Academy of Family Physicians
3627 North 60th Street
Scottsdale, AZ 85251

CLINICAL PSYCHIATRIC CONFERENCE

Weekly Wednesdays 11:40-12:45
Coconino Room, Maricopa County
General Hospital, Phoenix, AZ

SPONSOR: Maricopa County General Hospital, Dept. of Psychiatry

CONTACT:
Donald J. Holmes, M.D.
Maricopa County General Hospital
2601 E. Roosevelt
Phoenix, AZ

Approved for 1 elective hour per session toward the ArMA Certificate in Continuing Medical Education.

CONTINUING EDUCATION SEMINARS FOR PRACTICING PSYCHIATRISTS

Monthly — Thursday, 7:30 p.m.

SPONSOR: Department of Psychiatry College of Medicine, Univ. of Arizona

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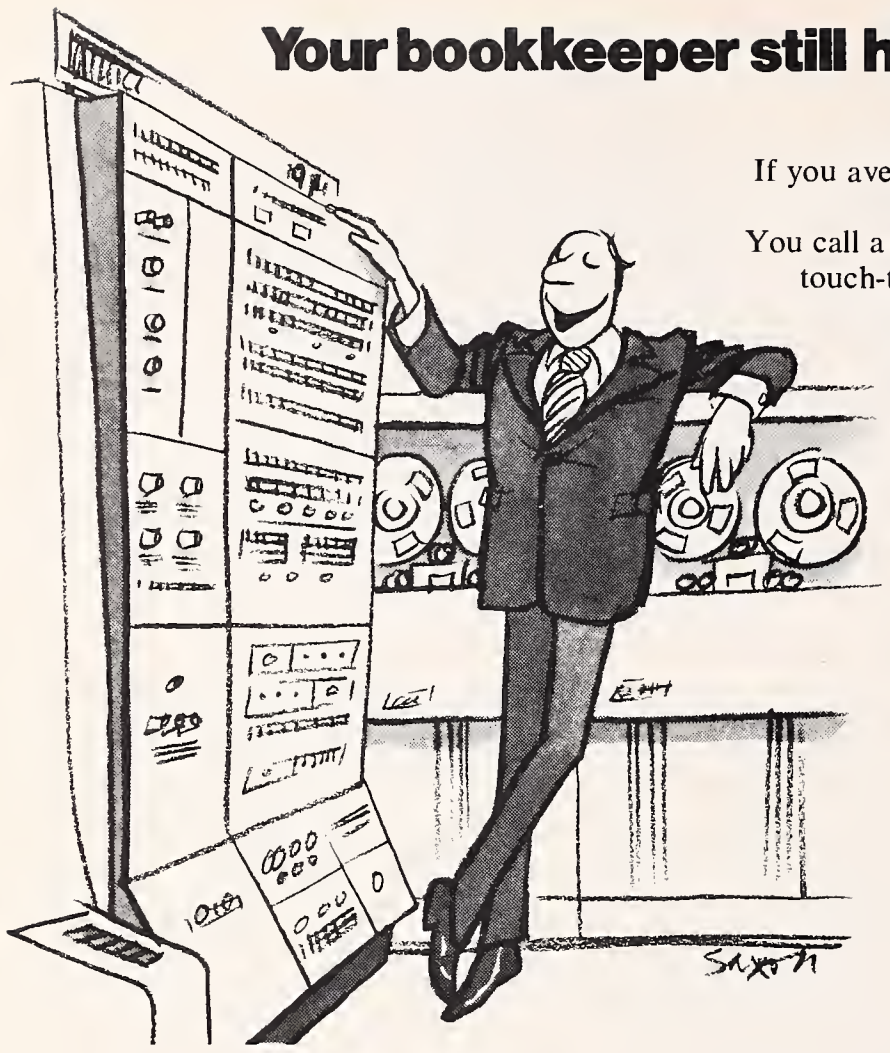
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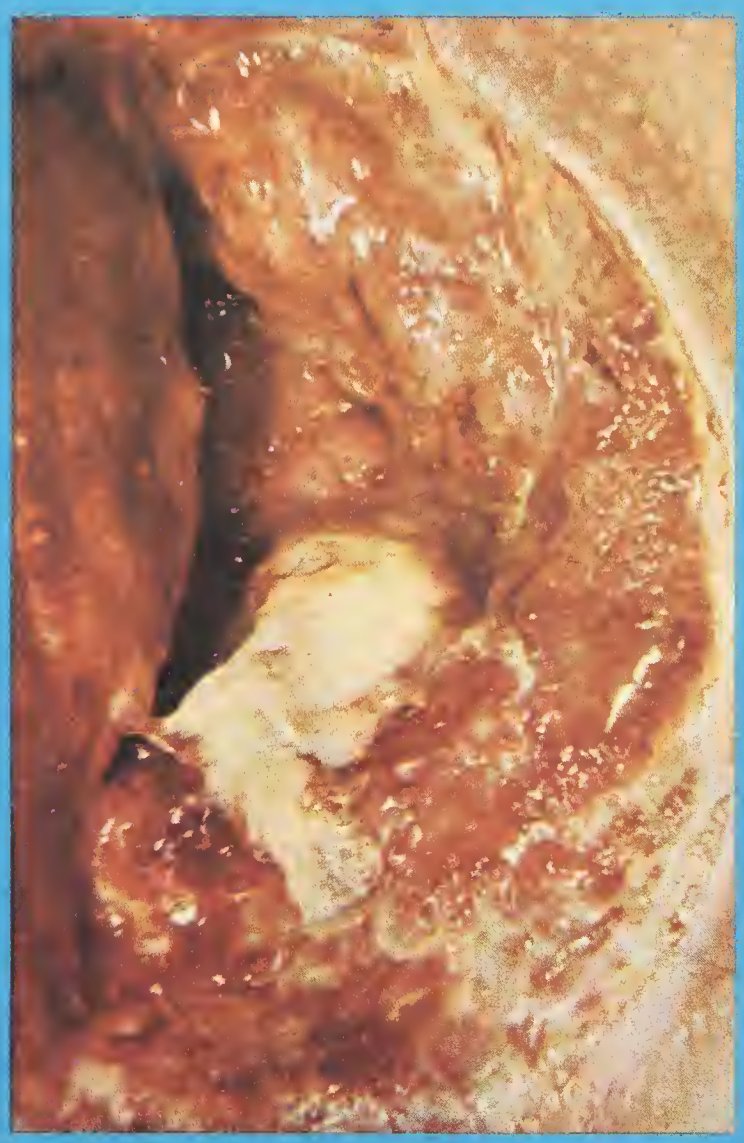
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APPLICATION TECHNIQUE: TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement. It dissolves and facilitates the removal of necrotic tissues and purulent exudates.

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Thoroughly soak the wound area. Where practical, tubbing or showering is suitable. Or wet soaks with gauze pads may be used. Remember to avoid chemical cleansing agents which may interfere with the therapy.



With a sterile cotton swab or finger cot, apply a very **thin** layer of TRAVASE Ointment. The ointment spreads easily and only a small amount is needed (a small dab of ointment will cover an area as big as the back of a hand).

Be sure, though, to rub the ointment well into every crack or crevice of the wound and overlap the surrounding skin one-fourth to one-half inch beyond the area to be debrided—to be sure of complete coverage.



Apply loose, wet dressings, thoroughly soaked in sodium chloride solution or sterile water to the area to be debrided only.



Cover the moist dressings with an occlusive wrap (Saran wrap, Telfa Pads, or other plastic wrappings) to keep wound site moist. Do not extend occlusive wrap over ½ inch beyond area to be debrided.



When changing dressing, gently wipe away the dissolved material. Repeat the complete dressing procedure, including application of TRAVASE Ointment, four times daily.

The ulcer shown in these photos is simulated on a model in order to demonstrate the correct TRAVASE application technique.

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_____Additional Information on TRAVASE® Ointment (brand of Sutilains)

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DESCRIPTION: TRAVASE® (brand of sutilains) Ointment is a sterile preparation of proteolytic enzymes, elaborated by **Bacillus subtilis**, in a hydrophobic ointment base consisting of 95% white petrolatum and 5% polyethylene. One gram of ointment contains approximately 82,000 case units* of proteolytic activity.

ACTION: TRAVASE Ointment selectively digests necrotic soft tissues by proteolytic action. It dissolves and facilitates the removal of necrotic tissues and purulent exudates that otherwise impair formation of granulation tissue and delay wound healing (4).

At body temperatures these proteolytic enzymes have optimal activity in the pH range from 6.0 to 6.8.

INDICATIONS: For wound debridement (1,2)—TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

Second and third degree burns,
Decubitus ulcers,
Incisional, traumatic, and pyogenic wounds,
Ulcers secondary to peripheral vascular disease.

CONTRAINDICATIONS: Application of TRAVASE (brand of sutilains) Ointment is contraindicated in the following conditions:

Wounds communicating with major body cavities,

Wounds containing exposed major nerves or nervous tissue,

Fungating neoplastic ulcers,

Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fe

WARNING: Do not permit TRAVASE Ointment to come into contact with the eyes. In treatment of burns or lesions about the head or neck, shou the ointment inadvertently come into contact with the eyes, the eyes sh be immediately rinsed with copious amounts of water, preferably steril

PRECAUTIONS: A moist environment is essential to optimal activity of enzyme. Enzyme activity may also be impaired by certain agents. In vil several detergents and antiseptics (benzalkonium chloride, hexachlorophene, iodine, and nitrofurazone) may render the substrate indifferent to the action of the enzyme (3). Compounds such as thimerc containing metallic ions interfere directly with enzyme activity to a slight degree, whereas neomycin, sulfamylon-streptomycin, and penicil do not affect enzyme activity. In cases where adjunctive topical therap has been used and no dissolution of slough occurs after treatment with TRAVASE Ointment for 24 to 48 hours, further application, because of interference by the adjunctive agents, is unlikely to be rewarding.

In cases where there is existent or threatening invasive infection, appropriate systemic antibiotic therapy should be instituted concurrent

Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response ir humans to absorbed enzyme material.

ADVERSE REACTIONS: Adverse reactions consist of mild, transient pa paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurr

If bleeding or dermatitis occurs as a result of the application of TRAV (brand of sutilains) Ointment, therapy should be discontinued. No syste toxicity has been observed as a result of the topical application of TRAVASE Ointment.

Dosage and Administration

STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFEC RESULTS OF TREATMENT

1. Thoroughly Cleanse and Irrigate Wound Area with sodium chlo or water solutions. Wound **MUST** be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., Hexachlorophene, Silver Nitrate Benzalkonium Chloride, Nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showe or wet soaks (e.g., sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate con with necrotic tissue and complete wound coverage extending t ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

How Supplied

3P3002 TRAVASE Ointment is supplied sterile in one-half ounce tube (14.2 g.) containing 82,000 casein units of sutilains per gram hydrophobic ointment base.

The ointment must be stored under refrigeration at 2° to 10° C (35° to 50° F).

References

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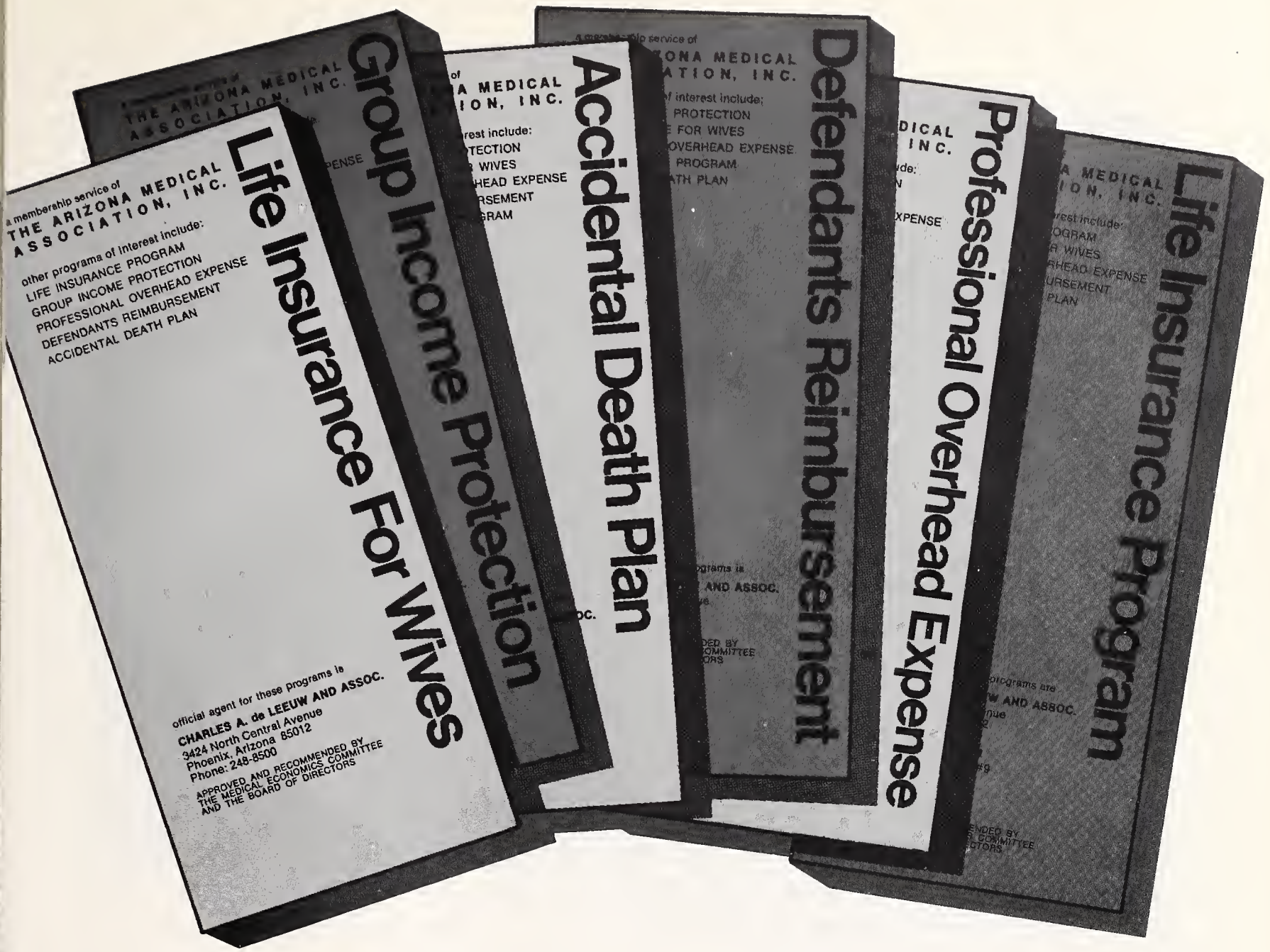
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3. Howes, E. L. The healing of the burn may be hindered by its first ai therapy. 20th Cong. Soc. Inter. Chir., Rome, Italy, September 14-23, 19

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*A casein unit is the amount of enzyme required to produce the same optical density at 275 mμ as that of a solution of 1.5 mcg. tyrosine/ml after the enzyme has been incubated with 35 mg. of casein at 37° C. one minute.

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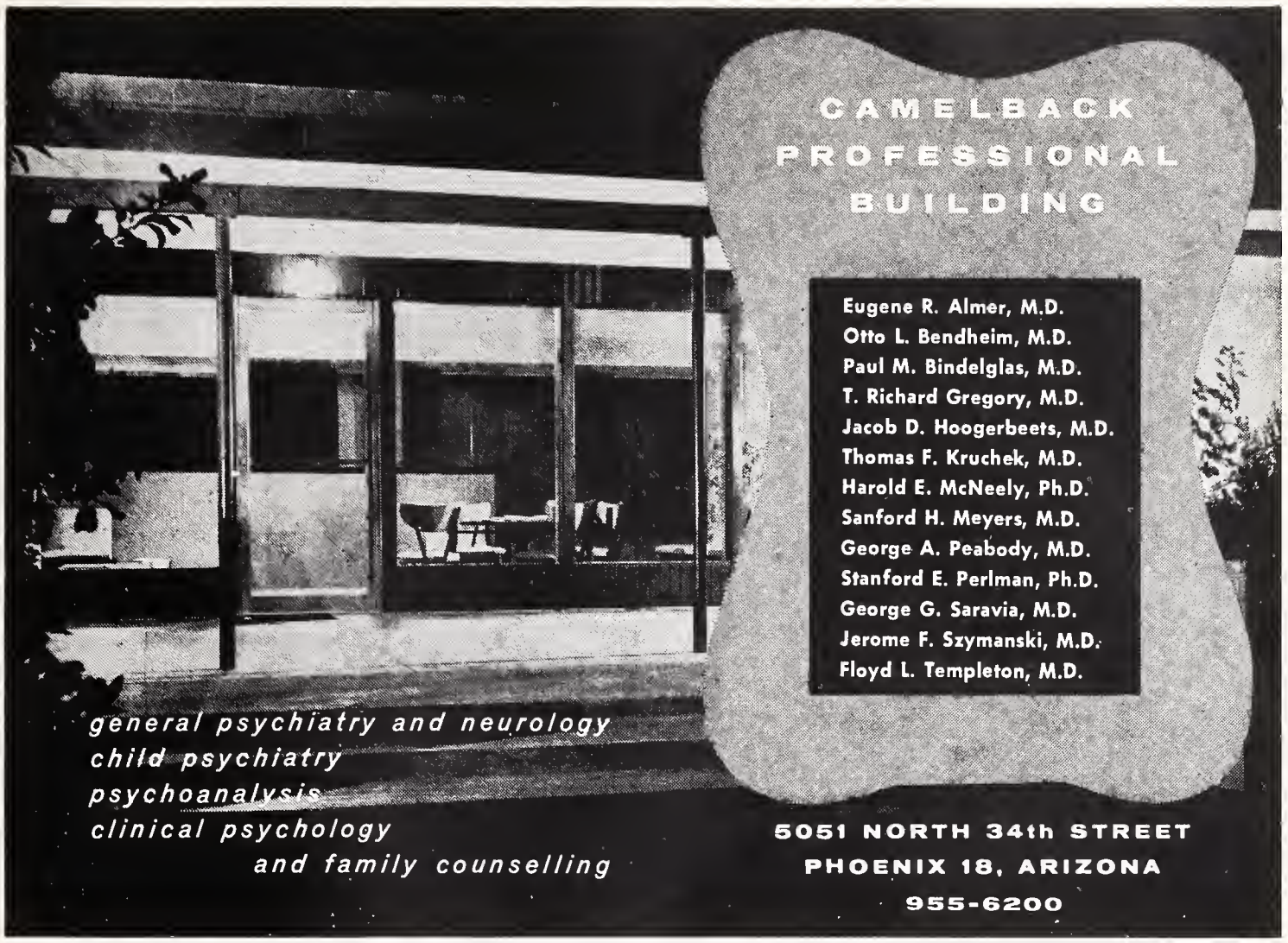
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